DOCUMENT RESUME

ED 091 995 HE 005 554

AUTHOR Durkee, Frank M.
TITLE Update Study of the Financial Condition of Independent Higher Education in Pennsylvania.
INSTITUTION Pennsylvania State Dept. of Education, Harrisburg. Bureau of Information Systems.
PUB DATE Jan 74
NOTE 75p.

EDRS PRICE MF-$0.75 HC-$4.20 PLUS POSTAGE
DESCRIPTORS *Educational Finance; *Enrollment Trends; *Financial Problems; *Higher Education; *Private Colleges; Productivity
IDENTIFIERS *Pennsylvania

ABSTRACT

The financial condition of independent higher education in Pennsylvania is examined based on data provided by 62 independent colleges and universities. Results of the study indicate: (1) Although the absolute enrollment in the independent sector of higher education continued to increase during the 10-year period, 1963-72, the independent sector's share of enrollment declined 13.9 percent. (2) The productivity of independent higher education institutions is shown by their degree output, which was 47.5 percent of the state total in 1972. (3) As a group the Commission for Independent Colleges and Universities (CICU) institutions reported an operating deficit of $4.6 million in 1969-70 but a $5.5-million surplus in 1971-72, a difference of +$10.1 million. (4) Of the six major operating accounts, only the educational and general account showed significant improvement, 1969-72. (5) Additions to plant during 1969-72 by CICU institutions amounted to $330.9 million. (6) The average expenditure per fulltime equivalent student increased from $3,764 in 1969-70 to $4,057 in 1971-72. (7) The Pennsylvania Higher Education Assistance Agency reported an increase in the number of scholarships awarded to students attending CICU institutions from 20,783 to 23,093, 1969-72, an increase of 11.1 percent. (8) The book value of endowment funds of CICU institutions increased from $558.2 million to $744.7 million, 1969-72. (9) The liquid net worth of CICU institutions increased, 1969-72, from $311.5 million to $335.5. (Author/MJM)

ED 091995

U S DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRO
DUCED EXACTLY AS RECEIVED FROM
THE PERSON OR ORGANIZATION ORIGIN
ATING IT. POINTS OF VIEW OR OPINIONS
STATED DO NOT NECESSARILY REPRE
SENT OFFICIAL NATIONAL INSTITUTE OF
EDUCATION POSITION OR POLICY

Update Study of the Financial Condition of Independent Higher Education in Pennsylvania

Prepared by
Frank M. Durkee
Research Associate
Higher Education Research Section
Division of Research
Bureau of Information Systems
Pennsylvania Department of Education

January 1974
Second Printing May 1974

HE 005.554

Commonwealth of Pennsylvania
Milton J. Shapp, Governor

Department of Education
John C. Pittenger, Secretary
David W. Hornbeck, Executive Deputy

Bureau of Information Systems
Seon H. Cho, Director

Division of Research
Robert B. Hayes, Director

Higher Education Research Section
Frank M. Durkee, Director

Pennsylvania Department of Education
Box 911
Harrisburg, Pa. 17126

TABLE OF CONTENTS

	Page No.
SUMMARY	x
Impact of Independent Higher Education--Enrollment	1
Enrollment Holding Power	3
Degree Output	3
General Financial Condition of CICU Higher Education Institutions	4
Comparative Annual Rates of Revenues and Expenditures by Group	6
Current Operating Results as a Percentage of Current Expenditures	6
Current Operating Results	9
Operating Results by Account	9
Operating Results by Account and Group, A-F	11
Projections of Operating Results	14
Plant Fund Results	15
Analysis of Plant Fund Results, 1969-72	15
Additions to Physical Plant	16
Private Gifts and Grants for Plant	17
Additions from Capitalized Current Expenditures	17
Debt Situation	17
Debt Service as a Percentage of Operating Expenditures	19
Debt Service Per FTEE	19
Projection of Plant Expenditures and Debt Service	20
Analysis of Per Student Expenditures by Account and Group with Growth Rates, 1969-72	21
Educational and General Expenditures Per FTEE	21
Instruction, Department Research, Faculty Salaries, Other, Extension and Public Service Per FTEE	21

TABLE OF CONTENTS
(continued)

	Page No.
Student-Faculty Ratio Per FTEE	22
Faculty Salary Data	23
Library Expenditures Per Weighted FTEE	25
Plant Maintenance and Operation Per FTEE	26
General Administration, General Institutional and Student Service Per FTEE	26
Other Educational and General Expenditures Including Sponsored and Separately Budgeted Research Per FTEE	27
Computer Expenditures	28
Tuition and Fee Revenue	30
Changes in Tuition and Fee Revenue	31
Tuition and Fee Revenue Per FTEE	32
Comparison of FTEE Student Aid and FTEE Tuition and Fee Income	33
Student Aid Expenditures as a Percentage of Tuition and Fee Revenue	36
Student Aid and the Commonwealth	36
Higher Education Institutional Aid by the Commonwealth	38
Overall Financial Health of CICU Institutions	38
Endowment Funds	38
Endowment Fund Income	41
Changes in Liquid Net Worth	42
Liquid Net Worth of Deficit Institutions	44
Projection of Financial Operating Condition	44
Additional Institutional Capacity	46
Additional Enrollment Desired	46
Nonutilized Student Housing Capacity 1972-73	46

TABLE OF CONTENTS
(continued)

	Page No.
Additional Enrollment Desired by Instructional Program	47
Reassessment of Retrenchment Proposals	49
Proposal One: Increase Student Faculty Ratio	49
Proposal Two: Reduce Enrollment Growth to One Per Cent Per Year	49
Proposal Three: Reduce Student Aid as a Fraction of Tuition by Two Per Cent Per Year to 16 Per Cent by 1975-76	50
Proposal Four: Reduce Administrative and General Expenditures by Two Per Cent Per Year From Projected Expenditures	51
APPENDICES	52
BIBLIOGRAPHY	61

LIST OF TABLES

Number	Title	Page
1	Full-Time Equivalent Enrollment in Higher Education Institutions by Category: Actual 1963-72 and Projected 1973-80	2
2	Enrollment Holding Power of Independent Colleges, 1969-70 to 1971-72	3
3	Total Bachelor Degree and Higher Output of Pennsylvania Higher Education Institutions, 1962-63 to 1971-72, With Percentages for Public and Independent Sectors, and Projections	4
4	Change by Group in Institution Financial Operating Result, 1969-70 to 1971-72	5
5	Change by Group in Institution Financial Surplus or Deficit Condition, 1969-70 to 1971-72	6
6	Operating Result by Group	9
7	Major Aggregate Operating Accounts, 1969-70 to 1971-72	10
8	Educational and General Operating Result, Excluding Sponsored Research, Dollar and Per Cent Change, 1969-72	12
9	Student Aid Operating Result, Dollar and Per Cent Change, 1969-72	12
10	Sponsored Research and Major Public Service Programs Operating Result, Dollar and Per Cent Change, 1969-72	13
11	Auxiliary Enterprises Operating Result, 1969-72	13
12	Average Annual Per Cent Change in Operating Result With Category Average and Group Average, 1969-72	13
13	1975-76 Projected Operating Results by Group, Using 1969-72 Data Base	14
14	Plant Fund Results, 1969-72	15

LIST OF TABLES
(continued)

Number	Title	Page
15	Additions to Physical Plant, 1969-72	16
16	Private Gifts and Grants for Capital Expenditures, 1969-72	17
17	Additions from Capitalized Current Expenditures, 1969-72	17
18	Increase in External Debt Each Year, 1969-72	18
19	Change in Indebtedness, 1969-72	18
20	Debt Service as a Percentage of Total Operating Expenditures, 1969-72	19
21	Debt Service Per FTEE, 1969-72	19
22	Projected Plant Expenditures, Average Available Capital Funds, Debt Service Requirement and Per Cent of Current Revenues Represented, by Group, 1975-76	20
23	Total Expenditures Per FTEE, 1969-72	21
24	Educational and General Expenditures Per FTEE and Average Annual Per Cent of Change, 1969-72	22
25	Instruction Including Departmental Research, Faculty Salaries, Other, Extension and Public Service Expenditures Per FTEE and Average Annual Change, 1969-72	22
26	Changes in Student-Faculty Ratio by Amount and Per Cent, 1969-72	23
27	Faculty Salary Expenditures Per FTEE and Average Annual Growth Rate, 1969-72	23
28	Average Annual Growth Rate and Dollar Increase in Faculty Salaries, 1969-72	24
29	Library Expenditures Per WFTEE and Average Annual Growth Rate, 1969-72	25
30	Plant Maintenance and Operation Expenditures Per FTEE and Annual Growth Rate, 1969-72	26

LIST OF TABLES
(continued)

Number	Title	Page
31	General Administration and Institutional and Student Service Expenditures Per FTEE and Average Growth Rate, 1969-72	27
32	Other, Including Sponsored and Separately Budgeted Research Per FTEE and Average Annual Growth Rate, 1969-72	28
33	Computer Expenditures, 1969-72, Results by Group and FTEE Cost, 1971-72	29
34	Computer Expenditures for Academic Purposes, 1969-72, and Results by Group	29
35	Computer Expenditures for Administrative and Other Purposes, 1969-72, and Results by Group	30
36	Tuition and Fee Revenue, 1969-72	31
37	Tuition and Fee Revenue Per FTEE, 1969-72	32
38	Student Aid Per FTEE as a Proportion of FTEE Tuition and Fee Income, 1969-72	35
39	Amount of Tuition and Fee FTEE Increase Due to Student Aid, 1969-72	35
40	Student Aid Expenditures as Percentage of Tuition and Fee Revenue, 1969-72	37
41	PHEAA Awards With Number and Dollar Changes, 1969-72	39
42	Operating Result and State Aid Impact by Group and Institution, 1969-72	40
43	Changes in Endowment Funds, 1969-72	41
44	Changes in Endowment Income, 1969-72	41
45	Changes in Liquid Net Worth, 1969-72, Using End of Year Statistics	43
46	Liquid Net Worth of CICU Institutions Having Operational Deficits, 1969-72, and Comparison of Liquid Net Worth and Operating Results for 1971-72	44
47	Projection of Financial Operating Condition of CICU Institutions Having a Deficit, 1969-72, to 1975-76	45

LIST OF TABLES
(continued)

Number	Title	Page No.
48	Additional Enrollment Desired, 1971-72 and 1972-73	46
49	Housing Capacity Available	47
50	Desired Enrollment in Instructional Program Areas, 1972-73	48
51	Relationship of Change in Enrollment and Change in Operating Results	50
52	Administration and General Expenditures by Group, with Annual Rate of Change, 1969-72	51

LIST OF FIGURES

Number	Title	Page No.
1	Comparative Annual Growth Rates of Revenues and Expenditures, 1969-70 to 1971-72, by Group	7
2	Distribution of Institutions' Current Results as a Percentage of Current Expenditures, 1971-72	8
3	Annual Growth Rate of Tuition and Fees Per FTEE, 1969-70 to 1971-72, by Group	34

SUMMARY

In September 1970 the Commission for Independent Colleges and Universities (CICU) engaged McKinsey & Company, Inc. to study the financial condition of independent higher education in Pennsylvania. This study also was encouraged by the Council of Higher Education of the Pennsylvania State Board of Education. The 1971 McKinsey report described a steady fiscal deterioration with prospects for increasingly large deficits. The 1972 updated McKinsey report saw some overall improvement, but the number of institutions experiencing negative operating results in excess of six per cent of expenditures increased from six to nine despite sharp increases in tuition.

The present study was conducted by the Pennsylvania Department of Education with the support of the CICU and the Pennsylvania State Board of Education. Operationally, it was a joint effort of the Division of Educational Statistics and the Division of Research in the Pennsylvania Department of Education. Cooperation was received from 62 of the 68 independent colleges and universities which participated in the original McKinsey study. This study used the nine data collection forms designed by McKinsey & Company, Inc. Highlights of the present study follow.

Enrollment

Although the absolute enrollment in the independent sector of higher education continued to increase during the 10-year period, 1963-72, the independent sector's share of enrollment declined 13.9 per cent. During 1969-72 the 62 CICU institutions reported in this study had a gain of 1,369 students, but the six nonreporting institutions had a loss of 587 students. Thirty-eight institutions in this study had increases in enrollment while 24 had small losses.

In the fall of 1973, the 62 institutions reported an enrollment decline of 805 students over 1972, while state-related universities and community colleges (the public sector) added 10,146 students.

Degree Output

The productivity of independent higher education institutions is shown by their degree output, which was 47.5 per cent of the state total in 1972. Although this was a drop from the 59.5 per cent of the degrees granted in 1963, the actual number of degrees awarded grew from 20,647 in 1963 to 33,994 in 1972.

General Financial Status

As a group CICU institutions reported an operating deficit of $4.6 million in 1969-70 but a $5.5 million surplus in 1971-72, a difference of +$10.1 million. Nineteen of these institutions, representing 35 per cent of CICU enrollment, however, had an operating deficit for one or more of the three-year period. Of these 19 institutions, 11 reported positive operating results, by 1971-72.

Operating Results by Account

Of six major operating accounts, only the educational and general account showed significant improvement, 1969-72. This improvement amounted to $12.8 million. Among the deficit accounts the student aid account lost the most ground, increasing a deficit of -$22.6 million to -$23.3 million.

Plant Fund Results

Additions to plant during 1969-72 by CICU institutions amounted to $330.9 million. Plant fund results showed a deficit of -$74 million in 1971-72, indicating a continuation of the trend shown in the two prior McKinsey reports.

Per Student Expenditures

The average expenditure per full-time equivalent student increased from $3,764 in 1969-70 to $4,057 in 1971-72. This increase of $293 represented an annual rate of increase of 3.9 per cent.

Per student expenditures, 1969-72, increased in the educational and general account by $160; faculty salaries, $67; library, $107; plant maintenance, $31; general administration, $50 and research, $24.

State Aid to Students

The Pennsylvania Higher Education Assistance Agency reported an increase in the number of scholarships awarded to students attending CICU institutions from 20,783 to 23,093, 1969-72, an increase of 11.1 per cent. These scholarships amounted to $19.1 million, with a value of $828 each in 1971-72. In 1972-73 these awards were increased to $878 per student.

In 1971-72 PHEAA administered guaranteed loans provided students $24.4 million, averaging $1,230 per student.

Endowment Funds

The book value of endowment funds of CICU institutions increased from $558.2 million to $744.7 million, 1969-72, an increase of $186.5 million and an average rate of 16.7 per cent. The return on these funds increased from $24.7 million to $25.3 million.

Liquid Net Worth

The liquid net worth of CICU institutions increased, 1969-72, from $311.5 million to $335.5 million, an improvement of $24 million and an average rate of 3.9 per cent. The liquid net worth of the various CICU institutions having an operational deficit one or more years, 1969-72, varied from a negative result to a positive $120.1 million.

Rehabilitative Measures

CICU institutions increased their student-faculty ratio, 1969-72, by an average annual rate of 1.57 per cent, falling short of the two per cent per year goal suggested by the McKinsey report. Group F having large graduate programs had a student-faculty ratio of 8.5 to 1.

Enrollment growth dropped to 0.58 per cent per year in 1972-73 for independent higher education, a lower rate than the one per cent decrease per year proposed by the McKinsey report. A correlational analysis of enrollment growth and operational results for the 19 institutions having operational deficits, one or more years, 1969-72, indicated, however, only an $r = .361$ relationship, leaving 87 per cent of the variance attributable to factors other than enrollment change.

Reduction of student aid below the 1[illegible] per cent of tuition and fees, as recommended by the McKinsey report, has been achieved with an average of 14.9 per cent. On the other hand, instead of reducing administrative and general expenditures by two per cent per year, CICU institutions increased these expenditures at an annual rate of 8.2 per cent per year from 1969 to 1972.

Nonutilized institutional capacity for desired enrollment of about 9,000 students among CICU institutions may call for the liberalization of admissions procedures.

Other measures for consideration to improve operating results at some CICU institutions include making auxiliary enterprises self-supporting, reduction of debt service, more efficient use of computers, strategic deployment of student aid funds, recognizing the close relationship between tuition and fees and the rate of increase of annual personal disposable income, building larger endowment funds and actively seeking higher annual rates of return, consistent with prudent investment practice, maximizing earned income from liquid net worth funds, larger PHEAA scholarship grants and loans.

UPDATE STUDY OF THE FINANCIAL CONDITION OF INDEPENDENT HIGHER EDUCATION IN THE COMMONWEALTH OF PENNSYLVANIA

The Commission for Independent Colleges and Universities in Pennsylvania authorized a study by McKinsey & Company, Inc. on the financial condition of independent education in Pennsylvania, February 1971 and February 1972. The State Board of Education with the cooperation of CICU proposed that the Pennsylvania Department of Education update this study of independent higher education.

This study reexamines the financial condition of independent higher education and presents results according to the six groups used in the McKinsey reports: Group A--two-year and specialized institutions; Groups B, C and D--four-year college institutions, subgrouped by enrollment and expenditures; Group E--universities with substantial graduate programs and Group F--strongly research-oriented universities in addition to graduate programs. The names of the institutions included in each group appear in Appendix A.

Impact of Independent Higher Education--Enrollment

Nationally, private higher education dominated the scene for the first 140 years before the Republic and during the first century of the life of the Republic.[1] With increasing support for public higher education institutions, the total enrollment of independent higher education declined to 25 per cent in 1970 and is projected to drop to 21 per cent by 1980 in the nation.[2]

In contrast to the national trend, independent higher education in Pennsylvania had 44.5 per cent of total full-time equivalent enrollment in 1970, 44.2 per cent in 1972 and is projected at 41.1 per cent in 1980. As shown in Table 1 the independent sector's share of total enrollment declined by 13.9 per cent, 1963-72, and is projected to decline 2.7 per cent more by 1980.

Enrollment in the public sector of higher education increased from 41.9 per cent of total enrollment in 1963 to 55.8 per cent in 1972, and is projected to reach 58.9 per cent in 1980. The CICU participating institutions, however, based on the 1969-72 trend, are expected to have limited growth in total enrollment.

---

[1] McGrath, Earl J. "Survival Kit for the Liberal Arts College," The Chronicle of Higher Education, January 10, 1972, p. 8.

[2] A Digest of Reports and Recommendations, Carnegie Commission for Higher Education, 1971, p. 88.

Table 1

Full-Time Equivalent Enrollment in Higher Education Institutions by Category: Actual 1963-72 and Projected 1973-30*

Year	Total	Public Sector	Per Cent	Independent Sector	Per Cent
1963	189,689	79,509	41.9	110,180	58.1
1964	207,110	89,361	43.1	117,749	56.9
1965	236,256	107,279	45.4	128,977	54.6
1966	258,600	123,988	47.9	134,612	52.1
1967	279,983	142,116	50.8	137,867	49.1
1968	298,422	159,227	53.4	139,195	46.6
1969	318,335	173,240	54.3	145,095	45.7
1970	331,236	183,834	55.5	147,402	44.5
1971	350,052	194,736	55.6	155,316	44.4
1972	354,585	197,713	55.8	156,872	44.2
Projected					
1973	358,132	201,432	56.2	156,700	43.8
1974	362,931	205,898	56.7	157,033	43.3
1975	369,798	211,032	57.1	158,766	42.9
1976	376,165	216,199	57.5	159,966	42.5
1977	383,466	221,533	57.8	161,933	42.2
1978	386,565	224,866	58.2	161,699	41.8
1979	386,998	226,366	58.5	160,632	41.5
1980	385,065	226,899	58.9	158,166	41.1

*Using the ratio of three part-time students as equivalent to one full-time student, this table shows the FTEE's for the public sector including state-owned, state-related and community colleges. The independent sector includes private state-aided and private nonstate-aided. Data came from Projections to 1982-83, Division of Educational Statistics, Bureau of Information Systems, Pennsylvania Department of Education, 1973, p. 11.

Total full-time equivalent enrollment in CICU higher education institutions in the Commonwealth was 137,382 in 1969-70, 140,168 in 1970-71, 143,692 in 1971-72 and is projected at 157,129 in 1975-76. This projection may not be fully reached because of such factors as rising tuition and the declining number of high school graduates after 1975. The average annual growth rate was 1.97 per cent in 1970-71 and 2.55 per cent in 1971-72, an improvement of 0.58 per cent, with the average annual growth rate for enrollment, 1969-72, at 2.26 per cent.

In the public sector of higher education, the comparable annual growth rate of enrollment was 6.1 per cent in 1970-71, 5.94 per cent in 1971-72 and 1.53 per cent in 1972-73. The independent sector enrollment growth rate also dropped significantly to 0.58 per cent in 1972-73.

The revised higher education enrollment projections of the Carnegie Commission for the nation show average annual rates of +3.2 per cent, 1970-80; -0.78 per cent, 1980-90 and +2.6 per cent in 1990-2000.[3] Enrollment growth in higher education in the nation and in the Commonwealth will, it appears, continue but at a long range slower pace.

Enrollment Holding Power

In the 1969-72 period the enrollment holding power of the CICU Groups A to F was rather good. Of 62 CICU institutions, 38 showed positive gains in enrollment while 24 showed small losses. Overall, the five groups gained 1,369 students, but for the six institutions not reporting financial data, the loss in enrollment was 587 students. Table 2 displays the data on holding power.

Table 2

Enrollment Holding Power of Independent Colleges, 1969-70 to 1971-72

Group	Number of Institutions	Positive Average[1]	Negative Average[1]	Group Increase[2]
A	6	5	1	+ 422
B	13	6	7	+ 11
C	26	14	12	+ 9
D	9	6	3	+ 46
E	5	4	1	+ 461
F	3	3	0	+ 420
Total	62	38	24	+1,369

[1]The average enrollment for 1969-70 to 1971-72 was compared with the enrollment for 1971-72.

[2]For the six schools that did not report financial data in this survey, the enrollment condition was three positive and three negative. The net enrollment condition for the six schools was a loss of 587 students.

Degree Output

The importance of independent higher education institutions is shown not only by total enrollment but by degree output. In the 1962-72 period the independent sector of higher education produced an average of 53.7 per cent of the graduates although it had only 49.6 per cent of

[3]The Higher Education Chronicle, October 1, 1973, p. 6.

the total enrollment, a gain of 4.1 per cent in output over that of the public sector. The degree output of the independent sector is projected to increase from 33,994 in 1971-72 to 38,500 in 1979-80. These data are shown in Table 3.

Table 3

Total Bachelor Degree and Higher Output of Pennsylvania Higher Education Institutions, 1962-63 to 1971-72, With Percentages for Public and Independent Sectors, and Projections*

Year	All Institutions	State-Owned State-Related Institutions	Per Cent	Independent Institutions	Per Cent
1962-63	34,704	14,057	40.5	20,647	59.5
1963-64	38,759	16,133	41.8	22,446	58.2
1964-65	40,543	17,526	43.2	23,017	56.8
1965-66	41,972	18,349	43.7	23,623	56.3
1966-67	45,030	19,862	44.1	25,168	55.9
1967-68	51,592	23,200	45.0	28,392	55.0
1968-69	59,149	28,556	48.3	30,593	51.7
1969-70	62,086	30,826	49.7	31,260	50.3
1970-71	66,440	34,237	51.5	32,203	48.5
1971-72	71,523	37,529	52.5	33,994	47.5
Projected					
1972-73	74,200	39,200	52.8	35,000	47.2
1979-80	82,800	44,300	53.5	38,500	46.5

*Data and projections are from Projections, Pennsylvania Department of Education, Division of Educational Statistics, Bureau of Information Systems, 1973, p. 16ff.

General Financial Condition of CICU Higher Education Institutions[4]

A financial summary for each group and all groups appears in Appendix B. For all groups A to F, total current revenues were $512.5 million in 1969-70, $547.2 million in 1970-71, $588.5 million in 1971-72 and are projected to be $795.9 million in 1975-76. For all groups total expenditures were $517.1 million in 1969-70, $543.5 million in 1970-71, $582.9 million in 1971-72 and are projected to be $749.4 million in 1975-76. Operating results showed a deficit of -$4.6 million in 1969-70

[4]The 1971 McKinsey report reflected financial data from 64 institutions. The 1972 updated McKinsey report was based on 61 institutions. The present report is based on 62 institutions and updated data.

a surplus of $3.7 million in 1970-71 and a surplus of $5.5 million in 1971-72, making an overall improvement, 1969-72, of $10.1 million. The projected operating result for 1975-76 is a surplus of $46.5 million for all groups.

These total results for the CICU institutions assume a continuation of the trends of the 1969-72 period. They could be changed by such factors as inflation, increased student aid and significant reduction in income resulting from loss of students, reduction in endowment income and private gifts and grants.

While in total the financial results for CICU institutions are generally favorable, they should not be permitted to conceal the unfavorable situation of some of them. As shown in Table 4, of the 62 institutions of this study 43 or 69.5 per cent had an overall operating surplus, 1969-72, while 19 institutions, or 30.6 per cent, had an overall operating deficit.

Table 4

Change by Group in Institution Financial Operating Result
1969-70 to 1971-72

Group	Number of Institutions	Institutions With Operating Surplus		Institutions With Operating Deficit	
		Number	Per Cent	Number	Per Cent
A	6	3	50.0	3	50.0
B	13	11	84.6	2	15.4
C	26	20	76.9	6	23.1
D	9	4	44.4	5	55.6
E	5	4	80.0	1	20.0
F	3	1	33.3	2	66.7
Total	62	43	69.4	19	30.6

The 19 institutions in a current operating financial deficit condition, 1969-72, had a total average enrollment of 49,491. This enrollment represented 35 per cent of the total enrollment of all 62 CICU institutions in this study.

Further analyzing the surplus or deficit financial operating condition of the CICU institutions, it was found that of the 44 institutions having a surplus, 1969-72, one had the same amount, 21 a larger amount, 17 a smaller amount and 5 went from a deficit to a surplus. Of the 15 deficit institutions in Table 5, 10 increased their deficit, 1969-72, four reduced their deficit and one went from a surplus to a deficit.

Table 5

Change by Group in Insitution Financial Surplus
or Deficit Condition, 1969-70 to 1971-72*

Group	Surplus			Deficit to Surplus	Deficit			Surplus to Deficit
	Same	More	Less		Same	More	Less	
A	0	2	1	0	0	1	1	0
B	0	3	6	0	0	2	1	0
C	1	9	7	3	0	4	1	1
D	0	3	1	2	0	2	0	0
E	0	3	2	0	0	0	0	0
F	0	1	0	0	0	1	1	0
Total	1	21	17	5	0	10	4	1

*Three institutions in sample did not submit 1971-72 data.

As shown in Table 5, 43 CICU institutions improved their surplus condition, and of 15 deficit institutions, four reduced their deficit, one came from a surplus to a deficit and 10 had a greater deficit in 1971-72 than in 1969-70.

Any deficit is bad for the fiscal health of a higher education insititution, but increasing the yearly deficit compounds the problem.

Comparative Annual Rates of Revenues
and Expenditures by Group

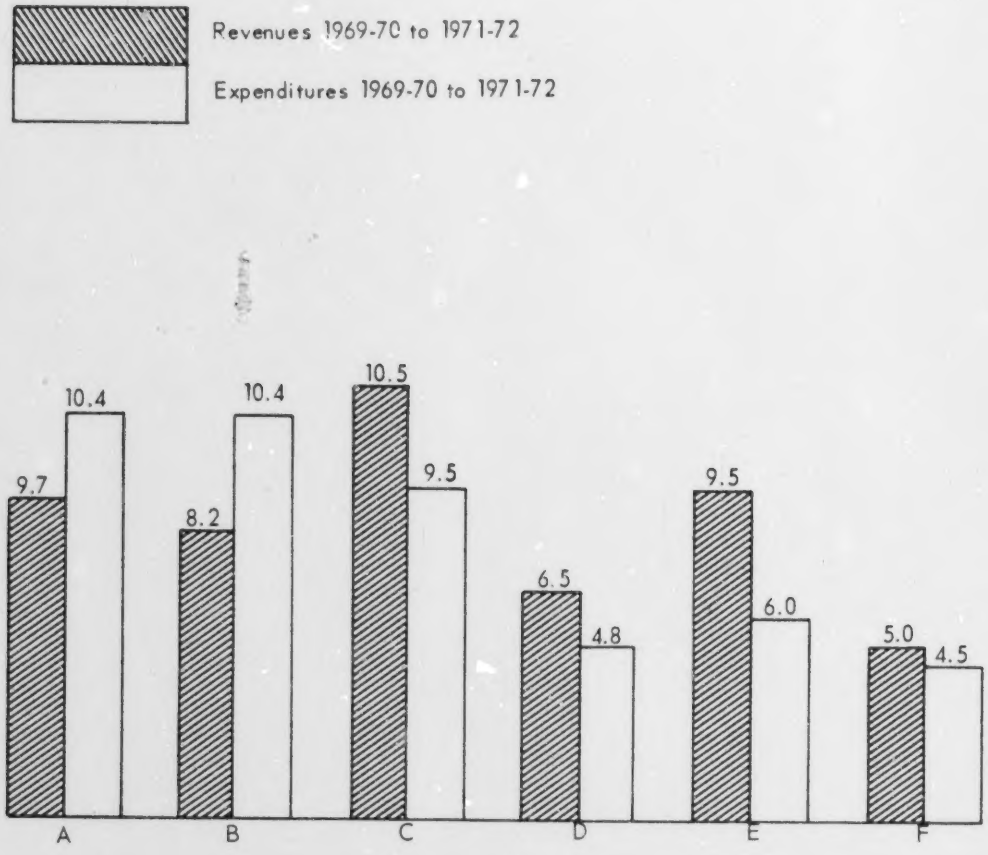
All but two groups of CICU institutions have had, 1969-72, a higher annual growth rate for revenues than expenditures. Groups A and B, however, had a deteriorating fiscal condition with an average rate of 9.7 per cent revenues to 10.4 per cent expenditures and 8.2 per cent revenues to 10.4 per cent expenditures resulting in negative operating rates of -0.7 per cent and -2.2 per cent, respectively (See Figure 1).

For all groups, A-F, the average annual growth rate for revenues was 7.4 per cent and for expenditures 6.2 per cent, providing an operating rate of 1.2 per cent. Group E had the best operating rate, 3.5 per cent.

Current Operating Result as a Percentage
of Current Expenditures

Figure 2 shows the number of CICU institutions having a favorable and unfavorable operating result for 1971-72 and indicates the percentage of total current expenditures represented by each. Nineteen institutions, for example, had a favorable operating result representing 0 to +2 per cent of total current expenditures and seven institutions a deficit operating condition ranging from 0 to -2 per cent.

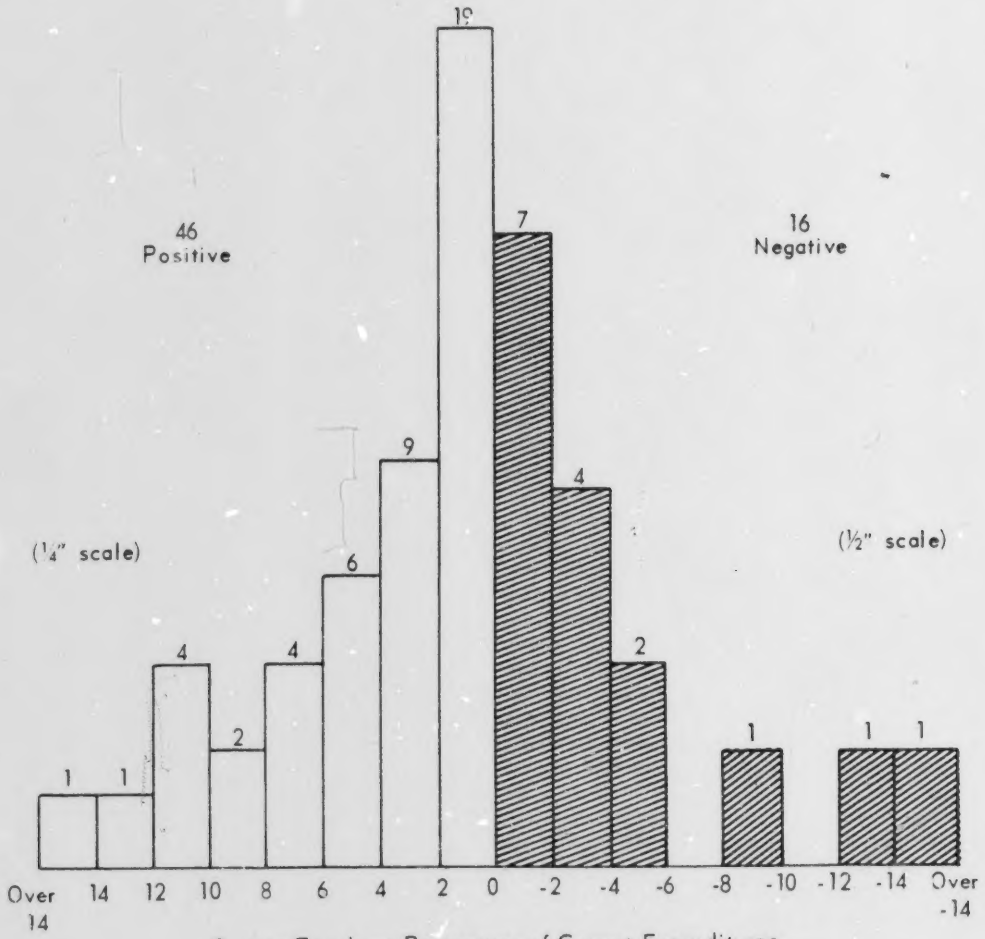
COMPARATIVE ANNUAL GROWTH RATES OF REVENUES
AND EXPENDITURES, 1969-70 TO 1971-72, BY GROUP



(Scale - 1 per cent = .1 inch)

Figure 1

DISTRIBUTION OF INSTITUTIONS' CURRENT RESULTS AS A PERCENTAGE OF CURRENT EXPENDITURES, 1971-72



Current Result as Percentage of Current Expenditures

Figure 2

In the section that follows current operating results are examined for the various groups, A-F, and for the various budget categories.

Current Operating Results

In 1971-72 the total operating result for the 62 higher education institutions participating in the update study was a positive $5.5 million. This was a $10 million improvement over the negative $4.5 result reported by these institutions for 1969-70 and $3.5 million more positive result than the $6.5 million improvement shown in the previous report.[5]

Table 6 provides the operating result (revenues - expenditures = operating result) for each group of institutions, 1969-70 to 1971-72.

Table 6

Operating Result by Group
(Dollars in Thousands)

Group	1969-70	1970-71	1971-72	Change 1969-72	Average Change
A	+$ 122	+$ 67	-$ 48	-$ 170	-$ 57
B	+ 2,259	+ 1,902	+ 1,181	- 1,078	- 359
C	+ 2,183	+ 3,245	+ 4,716	+ 2,533	+ 844
D	- 1,160	+ 121	+ 553	+ 1,713	+ 571
E	- 1,439	+ 3,692	+ 3,651	+ 5,090	+ 1,697
F	- 6,550	- 4,910	- 4,547	+ 2,003	+ 668
Total	-$4,584	+$3,747	+$5,506	+$10,091	+$3,364

Even with the overall improvement of $10 million, Groups A and B showed a negative result; Group C improved its positive base; Group D moved from a negative result in 1969-70 to a positive change of $1.7 million; Group E showed the greatest improvement, moving from a negative $1.4 million to a positive $5 million, accounting for 50.4 per cent of the total improvement for the six groups. Group F continued its deficit condition but showed a positive $2 million improvement.

Operating Results by Account

In Table 7 is shown the breakdown of operating results by account for the aggregated data for 62 higher education institutions.

---

[5] Update Study of the Financial Condition of Independent Higher Education in the Commonwealth of Pennsylvania, McKinsey & Company, Inc., February 1972, Chapter I, p. 2.

Table 7

Major Aggregate Operating Accounts, 1969-70 to 1971-72
(Dollars in Thousands)

	1969-70	1971-72	Net Result	Average Annual Growth Rate
Educational and General				
Revenues	$369,459	$421,349		.0679
Expenditures	349,894	388,977		.0544
Result	$ 19,565	$ 32,372	+$12,807	
Student Aid				
Revenues	$ 19,918	$ 22,826		.0710
Expenditures	42,584	46,183		.0420
Result	$-22,666	$-23,357	-$ 691	
Major Public Service Programs				
Revenues	$ 47,625	$ 53,322		.0599
Expenditures	49,023	54,623		.0562
Result	$- 1,398	$- 1,301	+$ 97	
Sponsored Research				
Revenues	$ 54,061	$ 49,267		-.0520
Expenditures	53,444	50,017		-.0354
Result	$ 617	$- 750	-$ 1,367	
Separately Budgeted Research				
Revenues	$ 102	$ 5		-.0520
Expenditures	439	294		-.1811
Result	$- 337	$- 289	+$ 48	
Auxiliary Enterprises				
Revenues	$ 75,499	$ 90,975		.0980
Expenditures	75,585	93,183		.1108
Result	$- 86	$- 2,208	-$ 2,122	
TOTAL[1]				
Revenues	$512,501	$588,472		.0720
Expenditures	517,085	582,966		.0620
Result	$- 4,584	$ 5,506	+$10,090	

[1]Sponsored and separately budgeted research are included in Educational and General, hence not in Total column.

As shown in previous studies, it is clear that the major improvement occurred in the educational and general account. The categories included in this account are shown in Appendix B.

Although student aid revenues have increased, 1969-72, a serious drain of funds is still caused by the student aid account. Student aid of $46.1 million in 1971-72 represented 11.9 per cent of all educational and general expenditures. Of this expenditure $10.5 million came from educational and general funds other than those designated for student aid. Of the $10.5 million, $3.7 million came from endowment funds.

The positive operating result of $32.4 million in 1971-72 for educational and general compared to $23.5 million in 1965-66 and $14.5 million in 1969-70 shown in McKinsey reports, constituted real improvement and represented 8.3 per cent of revenues.

Included in the major public service account are community programs "not essential to meeting the educational objectives of the institution," including expenditures for hospitals and organizations designated as federally funded research development centers. The negative result of -$1.4 million in 1969-70 was reduced to -$1.3 million in 1971-72.

Sponsored research had a negative result of -$0.75 million in 1971-72, and separately budgeted research, -$0.3 million.

Auxiliary enterprises includes housing, food service and expenditures for other services intended to be self-supporting, and it showed an operating deficit of $2 million, 1969-72. In 1971-72 housing required $34.5 million; food services, $29.7 million and other services, $28.8 million, for a total of $93 million.

Operating Results by Account and Group, A-F

Tables that follow will show operating results by account breakdown by group, A-F. Table 8 gives the operating result breakdown by group for the educational and general account.

Group D made the most improvement, 1969-72, $1.2 million or 151.7 per cent. Group F had the greatest dollar improvement, $6.4 million or 119.5 per cent, followed by Groups E and C. Group B had a negative change of -$0.79 million or 22.6 per cent. Complete data are given in Table 8.

Student aid operating result by group is shown in Table 9.

Although the student aid results are negative for all groups, Group E improved its position by $1.5 million or 29.7 per cent and Group D had an improvement of $.091 million or 6.2 per cent.

Sponsored research and major public service programs represented almost $104 million in the expenditures of the 62 CICU institutions in 1971-72 with percentage increase, 1969-72, from 20 per cent to 352 per

Table 8

Educational and General Operating Result, Excluding Sponsored Research, Dollar and Per Cent Change, 1969-72*

Group	1969-70	1970-71	1971-72	Dollar Change	Per Cent Change
A	$ 298	$ 377	$ 2,356	$ 58	+ 19.5
B	3,508	3,287	2,715	- 793	- 22.6
C	5,570	6,865	8,785	3,215	+ 57.7
D	815	2,144	2,051	1,236	+151.7
E	3,359	6,864	7,369	4,010	+119.4
F	5,398	9,838	11,846	6,448	+119.5
Total	$18,948	$29,375	$33,122	$14,174	+ 74.8

*Dollars in thousands

Table 9

Student Aid Operating Result, Dollar and Per Cent Change, 1969-72*

Group	1969-70	1970-71	1971-72	Dollar Change	Per Cent Change
A	-$ 265	-$ 261	-$ 348	-$ 83	-31.9
B	- 1,652	- 1,636	- 1,710	- 58	- 3.5
C	- 4,939	- 5,568	- 5,771	- 832	-16.8
D	- 1,471	- 1,626	- 1,380	91	+ 6.2
E	- 5,209	- 3,820	- 3,663	1,546	+29.7
F	- 9,130	- 9,967	- 10,485	1,355	-14.8
Total	-$22,666	-$22,878	-$23,357	-$ 691	- 3.0

*Dollars in thousands

cent among the six groups, A-F. Table 10 shows the breakdown by group.

Group F increased its operating deficit for research and major public service by $1.9 million or 204 per cent. Group D reduced its deficit by 20 per cent. Group E had the largest positive operating increase, almost $.5 million.

Table 10

Sponsored Research and Major Public Service Programs
Operating Result, Dollar and Per Cent Change, 1969-72*

Group	1969-70	1970-71	1971-72	Dollar Change	Per Cent Change
A	-$ 26	-$ 43	$ 18	$ 44	+169.2
B	- 37	0	28	65	+175.7
C	89	186	135	46	+ 51.7
D	- 10	- 15	- 8	2	+ 20.0
E	137	198	619	482	+351.8
F	- 934	- 1,791	- 2,843	- 1,909	-204.4
Total	-$781	-$1,465	-$2,051	-$1,270	- 62.6

*Dollars in thousands

Auxiliary enterprises operating change, 1969-72, was positive for Groups C and D, although Group D had only a lower negative result. (Table 11).

Table 11

Auxiliary Enterprises Operating Result, 1969-72
(Dollars in thousands)

Group	1969-70	1970-71	1971-72	Dollar Change	Per Cent Change
A	$ 115	-$ 6	-$ 74	-$ 189	- 164.3
B	440	251	148	- 292	- 66.4
C	1,463	1,762	1,567	+ 104	+ 7.1
D	- 494	- 352	- 110	+ 384	+ 77.7
E	274	50	- 674	- 948	- 346.0
F	- 1,884	- 1,990	- 3,065	- 1,181	- 62.7
Total	-$ 86	-$ 285	-$2,208	-$2,122	-2,467.4

In Table 12 the average annual per cent change for each account by group, 1969-72, is given. The negative rates indicate areas for study and improvement even when the average of the accounts shows a positive rate.

Table 12

Average Annual Per Cent Change in Operating Result With Category Average and Group Average, 1969-72

Group	Educational and General	Student Aid	Sponsored Research and Public Service	Auxiliary Enterprises	Group Average
A	- 9.7	-15.8	84.6	- 82.6	- 5.8
B	-11.3	- 1.8	89.2	- 33.2	+10.7
C	28.9	- 8.4	25.8	3.6	+10.9
D	75.8	3.1	10.0	38.9	+31.9
E	59.7	14.8	175.9	-173.0	+19.4
F	59.7	- 7.4	-102.2	- 31.4	-20.3
Category Average	+34.0	- 3.0	+ 47.2	- 46.3	

Projections of Operating Results

In Table 13 are given projections of operating results for 1975-76, using the 1969-72 trends. They do not take into account inflation, new vocational attitudes of students, or the energy shortage.

The McKinsey report of February 1972, using both end-of-year audited data and 1971-72 budget data, projected a worsening fiscal condition for all groups. Historical data, 1969-70 to 1971-72, used in this study show, however, all groups except Group A and Group B in a positive fiscal condition in 1975-76. All groups have apparently taken measures since the initial McKinsey report to maximize efficiency in financial operations.

Table 13

1975-76 Projected Operating Results by Group, Using 1969-72 Data Base*

Group	Revenues	Expenditures	Change
A	$ 20,200	$ 20,900	-$ 700
B	50,949	54,400	- 3,451
C	190,400	176,800	13,600
D	73,800	67,900	5,900
E	120,300	103,100	17,200
F	326,691	326,005	686
Total**	$795,900	$749,400	$46,500

*Dollars in thousands. **Total was projected separately.

Plant Fund Results

The question of whether a plant experditure is appropriate is sometimes answered affirmatively if the higher education institution has on hand all the funds required. There is, of course, a more business-like approach to plant funding. Even if an institution has all the funds needed for construction of a building, the institution should be sure of the positive contribution of the building to its educational operations, such as accommodation of enrollment, enrichment of curriculum and attraction of students. It should be assured also of the source of funds for the additional maintenance costs.

Being free of plant debt is a worthy fiscal condition, but if an institution can provide the debt service to construct an appropriate building that will enhance its service and income, the increase in plant debt should be considered as an educational asset rather than a fiscal liability. Debt of a higher education institution can actually be a measure of its viability rather than deviation from good financial management.

Analysis of Plant Fund Results, 1969-72

Plant fund results for three years, 1969-72, are shown in Table 14. From a negative result of -$39.3 million in 1969-70, plant results changed to a debt position of -$73.9 million in 1971-72. Groups B, E, D and C reduced their debt by 25.9 per cent, 36.5 per cent, 91.0 per cent and 93.2 per cent, respectively. Unusual capital expenditures by Group F, $58.2 million, increased its debt by 1,129.3 per cent.

Table 14

Plant Fund Results, 1969-72*
(Dollars in thousands)

Group	1969-70	1970-71	1971-72	Change 1969-72	Per Cent Change
A	-$ 1,417	-$ 485	-$ 2,518	-$ 1,101	- 77.6
B	- 4,295	- 2,906	- 3,179	+ 1,116	+ 25.9
C	- 19,604	- 8,683	- 1,029	+ 18,575	+ 93.2
D	- 3,269	+ 1,098	- 293	+ 2,976	+ 91.0
E	- 5,590	- 12,657	- 3,556	+ 2,034	+ 36.5
F	- 5,153	- 8,213	- 63,357	- 58,204	-1,129.3
Total	-$39,328	-$31,840	-$73,932	-$34,604	- 87.9

*Difference in total plant fund liabilities and reserves at beginning and end of year equals results.

Additions to Physical Plant

Averaging $110.3 million, 1969-72, the 62 CICU institutions in this study had a total of $330.9 million in capital expenditures. Some of this building may have been planned in the belief that great expansion of enrollment would continue into the 1980s, and to that extent may not be as utilitarian as originally intended. Groups A, C, D and E reduced their commitment to capital construction, 1969-72, but Group B had a relatively small increase, while Group F almost doubled its physical plant expenditures (Table 15).

The annual average debt for construction for all groups of $110.3 million was reduced by capital gifts and grants and capitalized current expenditures, 1969-72, by an annual average amount of $35.6 million or 32.3 per cent.

Groups A, C, D and E reduced expenditures for physical plant in 1971-72 to a percentage of those in 1969-70, 48.7, 60.8, 41.0 and 47.5 per cent respectively. Group B 1971-72 plant expenditures exceeded those of 1969-70 by 12 per cent, and Group F by 48.8 per cent.

Table 15

Additions to Physical Plant, 1969-72*

Group	1969-70	1970-71	1971-72	1969-72	Average
A	$ 4,360	$ 2,268	$ 2,236	$ 8,864	$ 2,955
B	8,789	7,170	9,843	25,802	8,601
C	34,650	34,841	13,552	83,043	27,681
D	10,332	4,929	6,094	20,725	6,908
E	10,571	24,273	5,542	40,386	13,462
F	40,369	32,812	78,973	152,154	50,718
Total	$109,071	$106,293	$116,240	$330,974	$110,325

*Dollars in thousands.

Private gifts and grants for capital expenditures, 1969-72, provided $73.5 million of the $330.9 million total construction costs or 22.2 per cent (Table 16).

Capitalized current expenditures provided $33.3 million toward the $330.9 million capital construction, 1969-72, or about 10 per cent (Table 17).

Table 16

Private Gifts and Grants for Capital Expenditures, 1969-72*

Group	1969-70	1970-71	1971-72	Average Dollar
A	$ 722	$ 378	$ 237	$ 446
B	2,130	2,568	3,010	2,569
C	7,343	6,944	4,854	6,380
D	6,282	2,759	6,452	5,164
E	3,393	3,096	977	2,489
F	12,014	3,668	6,691	7,458
Total	$31,884	$19,413	$22,221	$24,506

*Dollars in thousands

Table 17

Additions from Capitalized Current Expenditures, 1969-72*

Group	1969-70	1970-71	1971-72	1969-72	Average
A	$ 171	$ 272	$ 334	$ 777	$ 259
B	548	372	546	1,466	489
C	2,106	2,679	2,157	6,942	2,314
D	408	647	406	1,461	487
E	814	814	1,001	2,629	876
F	7,091	5,809	7,134	20,034	6,678
Total	$11,138	$10,593	$11,578	$33,309	$11,103

*Dollars in thousands

Debt Situation

External debt of all groups increased from $24.2 million in 1969-70 to $74.5 million in 1971-72 or 75.4 average per cent change. Groups A, C and D reduced external debt on average basis by 28.4, 37.3 and 79.9 per cent, respectively. Groups B, E and F increased external debt by an average of 4.3, 13.6 and 783.1 per cent, respectively (Table 18).

Table 18

Increase in External Debt Each Year, 1969-70 to 1971-72*

Group	1969-70	1970-71	1971-72	Average Change	Average Per Cent Change
A	$ 1,389	$ 512	$ 1,085	-$ 394	- 28.4
B	3,237	2,289	4,602	+ 139	+ 4.3
C	14,654	10,004	2,853	- 5,481	- 37.3
D	2,293	- 1,844	6	- 1,838	- 79.7
E	4,952	12,877	- 955	+ 673	+ 13.6
F	- 2,273	4,947	66,976	+ 20,942	+783.1
A-F	$24,252	$28,785	$74,567	+$18,282	+ 75.4

*Decrease in external debt is shown by minus (-); increase by plus (+).

Total debt, 1969-72, increased for Groups A-F from $258 million to $366 million, an increase of $108 million, or 41.7 per cent. Only Group D decreased its total debt, 1969-72, and by 3.3 per cent. Other total debt increases ranged from 12.8 per cent for Group C to 152.6 per cent for Group F (Table 19).

Table 19

Change in Indebtedness, 1969-72*

Group	Debt 1969-70	Debt 1970-71	Change	Debt 1971-72	Change	Change 1969-72	Per Cent Change
A	$ 6,008	$ 6,516	+ 508	$ 7,727	+ 1,221	+ 1,719	+ 28.6
B	25,010	28,234	+ 3,224	31,689	+ 3,455	+ 6,679	+ 26.7
C	100,179	109,554	+ 9,375	113,009	+ 3,455	+ 12,830	+ 12.8
D	44,135	43,417	- 718	42,698	- 719	- 1,437	- 3.3
E	35,586	48,459	+12,873	51,295	+ 2,836	+ 15,709	+ 44.1
F	47,398	56,880	+ 9,482	119,735	+62,855	+ 72,337	+152.6
Total	$258,316	$293,060	+34,744	$366,153	+73,093	+107,837	+ 41.7

*Dollars in thousands.

More important than total debt in the problem of viability of debt for higher education institutions is the demand made upon operating expenditures for debt service. For the 62 CICU institutions in this study debt service represented 2.4 per cent of operating expenditures in 1969-70, 2.7 per cent in 1970-71 and 3.4 per cent in 1971-72, averaging 2.9 per cent (Table 20).

Table 20

Debt Service as a Percentage of Total Operating Expenditures, 1969-72

Group	1969-70	1970-71	1971-72	Average
A	3.0	3.6	3.4	3.3
B	6.1	5.7	5.8	5.5
C	4.4	4.9	5.6	4.9
D	5.5	4.6	4.3	4.8
E	3.3	5.1	4.9	4.4
F	0.2	0.2	1.4	0.6
A-F	2.4	2.7	3.4	2.9

The proportion of operating expenditures used for debt service in 1971-72 decreased below the 1969-72 average for Group D only. For the other five groups debt service required a greater percentage of current expenditures, ranging from 1.4 per cent for Group F to 5.8 per cent for Group B.

Another way to examine debt service is in terms of its relationship to student enrollment. In 1969-70 debt service for all groups constituted $90 per FTEE in operating budgets; in 1970-71, $105; and in 1971-72, $137, indicating an increase of $47 per FTEE, 1969-72, or 52.6 per cent.

Group D showed a decline in debt service per FTEE from $243 to $201 or 42.51 per cent, but it still had the highest amount. The other groups increased debt service, 1969-72, per FTEE from $15 to $120 (Table 21).

Table 21

Debt Service Per FTEE, 1969-72

Group	1969-70	1970-71	1971-72	Dollar Change	Average Annual Per Cent Change
A	$ 66.60	$ 84.62	$ 83.57	+ 16.97	+ 25.5
B	107.26	111.05	122.35	+ 15.09	+ 14.1
C	103.20	125.38	147.09	+ 43.89	+ 42.5
D	243.94	205.28	201.43	- 42.51	- 17.4
E	77.02	118.74	117.52	+ 40.50	+ 52.6
F	16.77	17.58	137.41	+120.64	+719.4
A-F	$ 90.00	$105.40	$137.36	+ 47.36	+ 52.6

With the general enrollment slow-down facing institutions of higher education, proposals for expansion of facilities should be researched carefully. The student debt service per FTEE often may be reduced rather than increased by better utilization of available space.

Projection of Plant Expenditures and Debt Service

If the CICU higher education institutions operate in the 1972-76 period about as they have in the 1969-72 period, a projection of $113.3 million plant expenditures seems justified. Some plant expenditures will be required for improvement and replacement irrespective of any expansion.

Gifts and grants for capital development have been estimated to be the same in 1975-76 as the 1969-72 average. If they keep pace with inflation, they might increase at about six per cent per year, changing total funds available in 1975-76 from $24.5 million to $30.3 million (Table 22).

Table 22

Projected Plant Expenditures, Average Available Capital Funds, Debt Service Requirement and Per Cent of Current Revenues Represented, by Group, 1975-76*

Group	Plant Expenditures	Gift and Grant Capital Available[2]	Amount of Debt Service Needed	Debt Service Per Cent Operating Expenditure
A	$ 840	$ 446	$ 436	2.1
B	13,072	2,569	2,643	5.7
C	5,795	6,380	6,024	3.4
D	6,007	5,164	2,398	3.5
E	5,315	2,489	3,863	3.7
F	82,347[1]	7,458	5,649	1.7
Total	$113,376	$24,506	$21,013	3.5

*Dollars in thousands.

[1]Inclusion of the unusual year of 1971-72 may have put projection on the high side.

[2]The average of gifts and grants for capital use, 1969-70 to 1971-72, was used here as more realistic than a projection.

Debt service needed for CICU institutions in 1975-76 is projected as $21 million, which is $3.5 million less than the anticipated gifts and grants. Even though the total debt is projected as $383.7 million, since these institutions have the projected capacity to meet the debt service, they will be in a viable financial status. Should gifts and grants increase by the six per cent average estimated inflation and economic growth rate, then the amount available would exceed need by $9.3 million. This sum could be used for more rapid amortization of the debt.

These favorable projections for the groups ignore the fact, however, that certain CICU institutions may have trouble meeting their

capital debt service. The number will vary with the number having trouble obtaining and retaining adequate enrollment as well as the quality of their financial management.

Analysis of Per Student Expenditures by Account and Group With Growth Rates, 1969-72

Since the key variable in the financial equation of independent colleges is the student, it is appropriate to look at FTEE expenditures.

Table 23 presents total per FTEE expenditures by group. It indicates that all groups have increased their per FTEE expenditures, 1969-72, representing resources per student. While the average annual rate of increase for total expenditures was only 3.9 per cent, the group increases ranged from 1.6 per cent to 9.2 per cent, even though total expenditures ranged from 5 per cent to 10.5 per cent, as shown in Figure 1.

Table 23

Total Expenditures Per FTEE, 1969-72

Group	1969-70	1970-71	1971-72	1969-72 Dollar Change	Average Annual Growth Rate
A	$2,188	$2,352	$2,473	+$285	+6.3
B	1,772	1,945	2,110	+ 388	+9.2
C	2,339	2,548	2,636	+ 297	+6.2
D	4,407	4,477	4,667	+ 260	+2.9
E	2,316	2,332	2,388	+ 72	+1.6
F	8,604	8,910	9,534	+ 930	+5.3
Total	$3,764	$3,879	$4,057	+$293	+3.9

Educational and general account expenditures per FTEE appear in Table 24. The dollar change, 1969-72, ranged from $38 for Group E to $342 for Group F. The change per FTEE for total expenditures in this account was $160.

The average annual rate of change varied from 1.1 per cent for Group E to 10.8 per cent for Group B, with 3.1 per cent for the total account 1969-72. Compared with growth rates reported by the McKinsey update, all groups increased use of resources per student except Group C and Group D, which had decreases of 2.8 per cent and 1.7 per cent, respectively.

Instruction, Departmental Research, Faculty Salaries, Other, Extension and Public Service (Table 25), total expenditures for all groups per FTEE decreased by $16, 1969-72. Group F decreased its per

FTEE expenditures by $270. The smallest dollar increase, $11 per FTEE, was achieved by Group E; the largest, $115, by Group A. Growth rates of per FTEE expenditures varied from -5.3 per cent for Group F to +8.6 per cent for Group B.

Table 24

Educational and General Expenditures Per FTEE and Average Annual Per Cent of Change, 1969-72

Group	1969-70	1970-71	1971-72	1969-1972 Dollar Change	Average Annual Growth Rate	McKinsey Update Report Rates	Difference in Rate
A	1,670	1,783	1,878	+208	+ 6.1	+ 4.6	+2.5
B	1,139	1,273	1,398	+259	+10.8	+10.1	+0.7
C	1,578	1,740	1,807	+229	+ 7.1	+ 9.9	-2.8
D	3,062	3,159	3,295	+233	+ 2.0	+ 3.7	-1.7
E	1,692	1,707	1,730	+ 38	+ 1.1	- 2.4	+3.5
F	5,666	5,662	6,008	+342	+ 3.0	+ 1.1	+1.9
Total	$2,547	$2,598	$2,707	+160	+ 3.1		

Table 25

Instruction Including Departmental Research, Faculty Salaries, Other, Extension and Public Service Expenditures Per FTEE and Average Annual Change, 1969-72

Group	1969-70	1970-71	1971-72	1969-72 Dollar Change	Average Annual Growth Rate
A	$ 850	$ 888	$ 965	+$115	+6.6
B	555	593	654	+ 99	+8.6
C	779	848	868	+ 89	+5.7
D	1,352	1,414	1,461	+ 109	+4.0
E	829	830	840	+ 11	+0.7
F	2,362	1,987	2,092	- 270	-5.3
Total	$1,150	$1,095	$1,134	-$ 16	-0.6

Before looking at faculty salaries, it is desirable to examine changes in student-faculty ratio, 1969-70 to 1971-72. Table 26 presents student-faculty ratios (weighted FTEE-graduate with double weight) for the six groups with amount of change and per cent of change.

Table 26

Changes in Student-Faculty Ratio by
Amount and Per Cent, 1969-72

Group	1969-70	1970-71	1971-72	Ratio Difference 1969-72	Per Cent Change 1969-72
A	13.9	13.5	13.4	-0.5	- 3.6
B	17.6	16.7	16.5	-1.1	- 6.3
C	15.2	14.7	15.1	-0.1	- 0.7
D	11.6	11.8	11.9	+0.3	+ 2.6
E	16.2	17.7	19.5	+3.3	+20.4
F	8.7	8.4	8.5	-0.2	- 2.4
Total	12.8	12.7	13.2	+0.4	+ 3.1

Groups A, B, C and F decreased the number of students per faculty member, 1969-72, an action that contributed to higher per FTEE costs. Group D increased the number of students per faculty member by 0.3 and Group E, by 3.3 students, a 20.4 per cent change for Group E, and a highly significant change according to McKinsey report proposals for reducing expenditures. The student-faculty ratios for Group F are much lower than for other groups because of the high proportion of graduate students in its institutions. Overall, student-faculty ratio increased by 0.4.

Table 27 presents faculty salary data per FTEE and average annual growth rate, 1969-72. All groups increased faculty salary expenditures except Group E. Group E, as previously noted, increased the number of students per faculty member, and this resulted in 0.1 per cent reduction in faculty salary expenditures.

Table 27

Faculty Salary Expenditures Per FTEE and Average
Annual Growth Rate, 1969-72*

Group	1969-70	1970-71	1971-72	Dollar Change	Average Annual Growth Rate
A	$ 677	$ 720	$ 769	+$ 92	+6.6
B	465	505	559	+ 94	+9.7
C	650	715	732	+ 82	+6.2
D	1,069	1,111	1,158	+ 99	+4.1
E	638	645	637	- 1	-0.1
F	1,342	1,425	1,477	+ 135	+4.9
A-F	$ 808	$ 852	$ 875	+$ 67	+4.1

*Dollars in thousands.

The growth rate in faculty salary expenditures per FTEE averaged a 4.1 per cent increase for all groups. Group B showed the highest increase, 9.7 per cent, which is in line with its growth rates for expenditures of 10.4 compared with that of revenues, 8.2 per cent. In contrast Group E's faculty expenditures were at a rate of 6.0 compared with 9.5 per cent for revenue (Figure 1).

Decreasing the number of students per faculty member and at the same time increasing faculty salary expenditures cause an interacting and negative effect on operating results for higher education institutions.

Instruction and departmental research averaged $156.6 million, 1969-72, compared to $95.4 million in 1965-66. Instructional salaries alone averaged $118.7 million, with an annual growth rate of 6.42 per cent. They are projected as $171.6 million in 1975-76. Projections for each group appear in Appendix B.

Table 28 presents the average annual growth rate and the dollar increase for each group.

Table 28

Average Annual Growth Rate and Dollar Increase in Faculty Salaries, 1969-72*

Group	Average Annual Growth Rate	Dollar Increase
A	10.6	$ 802
B	10.9	1,795
C	9.4	5,616
D	5.9	1,529
E	4.3	1,719
F	4.1	3,252
A-F	6.4	$14,713

*Dollars in thousands.

While Group F had the lowest growth rate in faculty salaries, 1969-72, the salaries of these universities were so much better than those of other groups that not as much growth was needed to maintain a reasonable standard. Group E with a 4.3 per cent growth rate was in a similar status. Group B with a growth rate of 10.9 per cent and Group A with 10.6 per cent represent institutions that had a large measure of "catching up" to do, hence the high growth rates.

Faculty salary growth rates should be examined in terms of the growth rate of United States per capita disposable income.[6] The average

[6]Study of the Financial Condition of Independent Higher Education in the Commonwealth of Pennsylvania, McKinsey & Company, Inc., February 1971, pp. 2-10.

annual growth rate for United States disposable income for the past decade has been 5 per cent per year. With continuing inflation pressures, faculty salary growth rates may be significantly higher.

As Table 28 shows, faculty salary increases, 1969-72, accounted for an additional $14.7 million in the CICU budgets.

Library expenditures per weighted FTEE[7] increased in all groups from $95 to $101, 1969-72, or 6.1per cent, somewhat below the historical rate of 10.3 per cent, but the same average rate indicated by the McKinsey Update Report. In the aggregate these library expenditures averaged $15.8 million compared with $8.8 million in 1965-66, an increase of $7 million or 79.5 per cent. In the 1969-72 period total library expenditures increased at an average annual rate of 8.8 per cent; consequently, the projection for 1975-76 is $26.3 million.

Table 29 shows library expenditures per student for each group.

Table 29

Library Expenditures Per WFTEE and Average Annual Growth Rate, 1969-72

Group	1969-70	1970-71	1971-72	Dollar Change	Average Annual Growth Rate	McKinsey Update Growth Rate
A	$ 75	$ 73	$ 81	+$ 6	+ 4.2	-0.5
B	74	80	83	+ 9	+ 6.0	+5.4
C	82	90	88	+ 6	+ 3.8	+9.6
D	183	195	209	+ 12	+ 6.9	+8.1
E	66	64	73	+ 7	+ 5.6	-5.2
F	120	132	147	+ 27	+10.7	+7.1
A-F	$ 95	$101	$107	+$12	+ 6.1	+6.1

Group D had the highest library expenditure per student, $183 to $209, 1969-72. Group F had the greatest per student increase, $120 to $147, or an average annual increase of 11.3 per cent. Group E had the lowest per student expenditure, $66 to $73, or an average annual increase of 5.3 per cent.

[7] In the weighted FTEE each graduate student is given a weight of 2.

Plant Maintenance and Operation expenditures per FTEE increased from $268 to $299, 1969-72, an average annual growth rate of 5.7 per cent. In the aggregate these expenditures increased from $36.7 million to $42.9 million, 1969-72, an average annual growth rate of 9.1 per cent. They are projected to be $63.3 million in 1975-76.

Table 30 shows these expenditures per student by group.

Table 30

Plant Maintenance and Operation Expenditures Per FTEE and Annual Growth Rate, 1969-72

Group	1969-70	1970-71	1971-72	Dollar Change	Average Annual Growth Rate
A	$194	$217	$223	+$29	+ 7.3
B	130	152	168	+ 38	+13.7
C	201	224	248	+ 47	+11.1
D	383	406	390	+ 7	+ 1.1
E	259	248	250	- 9	- 1.7
F	423	460	493	+ 70	+ 8.0
A-F	$268	$287	$299	+$31	+ 5.7

Although per student increases in plant maintenance and operation expenditures may represent better service to students, they require constant attention for achievement of maximum cost benefit to the institution.

Group E, with a plant construction of $40.3 million, decreased its expenditures at an average rate of 1.7 per cent, 1969-72. Group B increased its plant maintenance and operation expenditures per student from $130 to $168, or an average annual rate of 13.7 per cent, even though its plant construction was only $25.8 million.

Group D had the lowest rate of increase, 1.1 per cent, even though it had $21.3 million in plant construction. Group C had the second highest annual rate of increase in plant maintenance and operation expenditures perstudent, 11.1 per cent, with $83 million in plant construction, but with construction declining annually at a rate of 6.3 per cent.

General administration, general institutional and student service expenditures include administrative expenses, auditing, bulletins, catalogues, convocations, memberships, financial campaigns, staff benefits not included in other categories, principal and interest charged to operating expenditures, student personnel, registrar's office, admissions, placement, student counseling and student health services. For all groups these expenditures increased from $410 to $460 per student, 1969-72, or at

an annual growth rate of 6.0 per cent, and in aggregate averaged $19.8 million. The trend for the period projects these expenditures as $30.4 million in 1975-76.

Table 31 presents these expenditures for each group.

Table 31

General Administration and Institutional and Student Service Expenditures Per FTEE and Average Growth Rate, 1969-72

Group	1969-70	1970-71	1971-72	Dollar Change 1969-72	Average Annual Growith Rate
A	$450	$510	$510	+$60	+ 6.6
B	354	383	429	+ 75	+10.1
C	412	451	457	+ 45	+ 5.4
D	803	795	857	+ 54	+ 3.4
E	368	382	390	+ 22	+ 3.0
F	321	354	385	+ 64	+ 9.6
A-F	$410	$439	$460	+$50	+ 6.0

Group E had the smallest increase per student for these expenditures, 1969-72, an average annual rate of 3.0 per cent; group B had the largest, 10.1 per cent; Group D had the highest level of average per student expenditures for the period, $818, compared to an average for all groups of $436.

Variations from the average per student expenditure by a group should be examined for cost benefit implications. Similarly, each institution within a group could profitably assess its expenditures with reference to the group average.

Other educational and general expenditures, including sponsored and separately budgeted research, increased per student from $613 to $695 for all groups, 1969-72, an annual growth rate of 6.5 per cent. In terms of total expenditures the other educational and general account increased from $29.3 million to $49.5 million, 1969-72, a 30.9 per cent average annual rate, and is projected to be $57.5 million in 1975-76.

The sponsored and separately budgeted research accounts expenditures averaged $50.9 million, 1969-72, compared with $35.9 million in 1965-66. Sponsored research declined from $53.4 million to $50 million, 1969-72, or at an average annual rate of 3.54 per cent, and if this trend continues, will be $43.3 million in 1975-76. Separately budgeted research by institutions declined from $.44 million to $.29 million, 1969-72, and is projected as $.16 million in 1975-76.

Outside funds have become less available for research, and the cost of the research component for instruction should properly be charged to instruction.

Table 32 presents these data for each group.

Table 32

Other, Including Sponsored and Separately Budgeted Research Per FTEE and Average Annual Growth Rate, 1969-72*

Group	1969-70	1970-71	1971-72	Dollar Change 1969-72	Average Annual Change Rate
A	$ 98	99	$ 96	- $ 2	- 1.0
B	25	63	61	+ 36	+74.4
C	102	115	143	+ 41	+18.5
D	341	349	378	+ 37	+ 5.3
E	160	171	164	+ 4	+ 1.4
F	2,398	2,681	2,839	+ 441	+ 8.9
A-F	613	664	695	+ 82	+ 6.5
A-E	$ 145	$ 160	$ 169	+ 24	+16.5

*Research, other sponsored Programs, Department Organized Activities, Education and General.

Group F, the research-oriented universities, had more research expenditures per student than all the other groups combined, $7.9 million, 1969-72, with an annual growth rate of 8.9 per cent. Group B had the greatest average growth, 74.4 per cent; Group E, the least, 1.4 per cent. Only Group A declined, an average of 1.0 per cent.

Computer Expenditures

Computer expenditures in CICU institutions increased from $5.3 million in 1969-70 to $6.7 million in 1971-72, an annual growth rate of 12 per cent and an average per FTEE expenditure of $46.48 in 1971-72. This comparatively new area of expenditure has increased rapidly and significantly, 1969-72, and should be carefully assessed for cost-benefit implications.

Table 33 presents the data and analysis of total computer expenditures.

The universities represented in Groups E and F accounted for more than 70 per cent of the total CICU expenditures for computers in 1971-72. Only Group F reduced computer expenditures, which was in the amount of $0.92 million, 1969-72.

Table 33

Computer Expenditures, 1969-72, Results by Group and FTEE Cost, 1971-72*

Group	1969-70	1970-71	1971-72	Dollar Change	Per Cent Change	Average Annual Per Cent Change	Cost Per FTEE 1971-72
A	$ 35	$ 59	$ 63	+$ 28	+80.0	+35.6	$ 11.08
B	134	151	195	+ 61	+45.5	+20.9	11.41
C	841	1,072	1,298	+ 457	+54.3	+24.2	27.82
D	199	217	337	+ 138	+69.3	+32.4	27.94
E	1,124	1,589	1,888	+ 764	+68.0	+29.7	56.31
F	2,991	2,927	2,899	- 92	- 3.1**	- 1.5	101.02
Total	$5,324	$6,015	$6,680	+$1,356	+25.5	+12.0	$ 46.48

*Dollars in thousands.
**A large university in this group did not report data.

Of the total expenditures for computers in 1971-72 by CICU institutions, 55 per cent was for academic purposes. Only Group F reduced computer expenditures for academic purposes, 2.5 per cent. The annual growth rate for all groups averaged 9.9 per cent (Table 34).

Table 34

Computer Expenditures for Academic Purposes, 1969-72, and Results by Group*

Group	1969-70	1970-71	1971-72	Dollar Change	Per Cent Change	Average Annual Per Cent Change
A	$ 17	20	18	+$ 1	+ 5.8	+ 3.8
B	33	41	68	+ 35	+106.1	+45.0
C	299	377	484	+ 185	+ 61.8	+37.3
D	149	156	253	+ 104	+ 58.8	+33.4
E	534	702	882	+ 348	+ 65.2	+29.5
F	2,017	2,055	1,967	- 50	- 2.5	- 1.5
Total	$3,049	$3,351	$3,672	+$623	+ 20.4	+ 9.9

*Dollars in thousands.

Computer expenditures for academic purposes for all groups increased by $623,000, 1969-72. Group E had a large increase, $348,000;

Group C the next largest increase, $185,000 and Group D, an increase of $104,000. Groups A and B had small increases in comparison with the other groups.

Computer expenditures for administration and other purposes increased from $2.27 million in 1969-70 to $3.0 million in 1971-72, almost a third. In 1971-72 they represented 45 per cent of total computer expenditures. During the 1969-72 period Group A increased the proportion of its computer expenditures for administration from 50 per cent to 71 per cent. While Group C computer expenditures increased by $457,000, the proportion for administration decreased by 1.7 per cent (Table 35).

Table 35

Computer Expenditures for Administrative and Other Purposes, 1969-72, and Results by Group*

Group	1969-70	1970-71	1971-72	Dollar Change	Per Cent Change	Average Annual Per Cent Change
A	$ 18	$ 39	$ 45	+$ 27	+150.0	+69.9
B	101	110	127	+ 26	+ 25.7	+13.8
C	542	695	814	+ 272	+ 50.2	+21.0
D	50	61	84	+ 34	+ 68.0	+29.8
E	590	887	1,006	+ 406	+ 68.8	+31.8
F	974	872	932	- 42	- 4.3	- 2.3
Total	$2,275	$2,664	$3,008	+$723	+ 31.8	+15.4

*Dollars in thousands.

Of total computer expenditures, 1969-72, those for administration purposes increased by 32 per cent while those for academic programs increased by 20 per cent.

Tuition and Fee Revenue

Crucial to all analyses of expenditures of CICU institutions is the matter of tuition and fees. The McKinsey report maintained that tuition and fee increases are not self-defeating so long as they do not exceed the growth of U.S. per capita disposable income, for they will not then require a greater proportion of family income.[8]

Using U.S. census population figures and personal disposable income,[9] one finds that disposable per capita income increased annually,

[8] Op. cit., McKinsey, Chapter 2, p. 10.

[9] Statistical Abstract of the United States 1972, p. 317.

1960-70, by 7.4 per cent. One CICU institution, for example, increased its tuition and fees from $1,985 in 1960-61 to $3,815 in 1970-71, a total of $1,830 or an average annual rate of 7.1 per cent. While many independent colleges and universities had a decrease in student enrollment in 1973-74, this institution had an increase of 228 students.

Changes in Tuition and Fee Revenue

For all CICU groups total tuition and fee revenue increased from $207.2 million in 1969-70 to $254.1 million in 1971-72, an increase of $46.8 million, or 22.5 per cent, but by an annual growth rate of 10.7 per cent. In the same period total operating revenues increased by $75.9 million, or 14.8 per cent, but by an annual growth rate of 7.2 per cent. Tuition and fees represented 40.4 per cent of total operating revenues in 1969-70, 42.1 per cent in 1970-71 and 43.1 per cent in 1971-72, and are projected as 47.8 per cent in 1975-76. During the 1969-72 period the 2.7 per cent increase in the proportion of total revenue supplied by tuition and fees did not represent a significant change for all groups(Table 36).

Table 36

Tuition and Fee Revenue, 1969-72*

Group	1969-70	1970-71	1971-72	Dollar Change	Per Cent Change	Average Annual Growth Rate
A	$ 6,941	$ 7,405	$ 8,602	+$ 1,661	+23.9	+11.4
B	17,840	20,047	21,485	+ 3,645	+20.5	+ 9.7
C	62,576	71,168	78,427	+ 15,851	+25.3	+11.9
D	23,612	26,080	28,337	+ 4,725	+20.0	+ 9.5
E	43,136	48,590	53,262	+ 10,126	+23.5	+11.0
F	53,128	57,545	63,972	+ 10,844	+20.4	+ 9.7
Total	$207,233	$230,835	$254,085	+$46,852	+22.5	+10.7

*Dollars in thousands.

The average annual rate of increase in tuition and fees of 10.7 per cent was less than that shown by a nationwide study of 554 higher education institutions, 1967-71, a rate of 11-12 per cent,[10] and in comparison appears viable. The same study found that a 40 per cent increase in total tuition and fee income, 1967-68 to 1970-71, whereas CICU institutions in this study had an increase of 22.5 per cent, a 17.5 per cent advantage for CICU students.

[10]Jellema, William. Financial Status, Present and Projected of Private Institutions of Higher Learning, Association of American Colleges, 1971, p. 7.

Group C institutions (29) had the largest increase in tuition and fees, 1969-72, but had an increasing total operating surplus. It also had six institutions with a deficit, only two of which appear to be on the road to an operating surplus.

Group A (7) had the second largest increase in tuition and fees, 1969-72, and a declining operating condition with a deficit in 1971-72. It had three institutions in a deficit condition with one of these on the way to an operating surplus.

Group E (5) had the third largest increase in tuition and fees and changed its operating result from a deficit in 1969-70 to surpluses in the next two years. Only one of its institutions was in a deficit condition, and its operating trend projects a $4.5 million surplus by 1975-76.

Group B (14) increased tuition and fees by 20.5 per cent and had an operating surplus which decreased each year. It had two institutions with an operating deficit, one of which is projected to have a surplus of $200,000 by 1975-76.

Group F (4) increased tuition and fees by 20.4 per cent and had decreasing annual operating deficits. It had two institutions with operating deficits, which are likely to be reduced but not eliminated by 1975-76. One of these two is projected as free of deficit in 1976-77.

Tuition and Fee Revenue Per FTEE

FTEE data include all students. Commuter and part-time students are counted in full-time units but may not require institutional expenditures for many services, such as housing and food. Table 37 presents FTEE data on tuition and fees.

Table 37

Tuition and Fee Revenue Per FTEE,
1969-70 to 1971-72

Group	1969-70	1970-71	Dollar Change	Per Cent Change	1971-72	Dollar Change	Per Cent Change	Average Annual Per Cent Change
A	$1,317	$1,356	+$ 39	3.0	$1,513	+$157	11.6	7.3
B	1,069	1,159	+ 90	8.4	1,258	+ 99	8.5	8.5
C	1,427	1,593	+ 166	11.6	1,681	+ 88	5.5	8.6
D	2,029	2,166	+ 137	6.8	2,350	+ 184	8.5	7.7
E	1,401	1,515	+ 114	8.1	1,589	+ 74	4.8	6.5
F	1,823	2,015	+ 192	10.5	2,229	+ 214	10.6	10.6
A-F	$1,508	$1,648	+$140	9.3	$1,768	+$120	7.3	8.3

Average tuition and fees for CICU institutions changed from $1,508 in 1969-70 to $1,648 in 1970-71, an increase of $140, or 9.3 per cent; and further increased to $1,768 in 1971-72, an increase of $120, or 7.3 per cent. The average annual growth rate in tuition and fees per FTEE was 8.3 per cent, which was even less than that of the representative mean college nationwide, 1960-68, a rate of 9.68 per cent.[11] Only Group F, four years later in a higher cost period, exceeded the national FTEE average growth rate for tuition and fees, and that by less than 1.0 per cent. This growth rate of 10.6 per cent occurred, as might be expected, in a group where half of the institutionshad suffered continuing operational deficits.

In Group E only one of five institutions had an operating deficit, 1969-72, and this group had the lowest FTEE growth rate in tuition and fees, 6.5 per cent.

Although higher education finance studies have tended to show that "the trends in fees and in enrollments have paralleled each other,"[12] other important factors are level of economic activity and particularly student aid. The impact of these conditions seems to emerge from a comparison of the growth rates of tuition and fees found by the McKinsey study, 1965-70, and the present study, 1969-72. Figure shows the comparative growth rates. The difference in rates by group are: A, 0.4 per cent; B, 1.6 per cent; C, 10.9 per cent; D, 1.1 per cent; E, 1.0 per cent and F, 4.5 per cent.

Comparison of FTEE Student Aid and FTEE Tuition and Fee Income

This study has already noted the expenditure by CICU institutions of student aid funds in excess of student aid revenues. Comparison of the FTEE tuition and fee income with FTEE student aid is presented in Table 38.

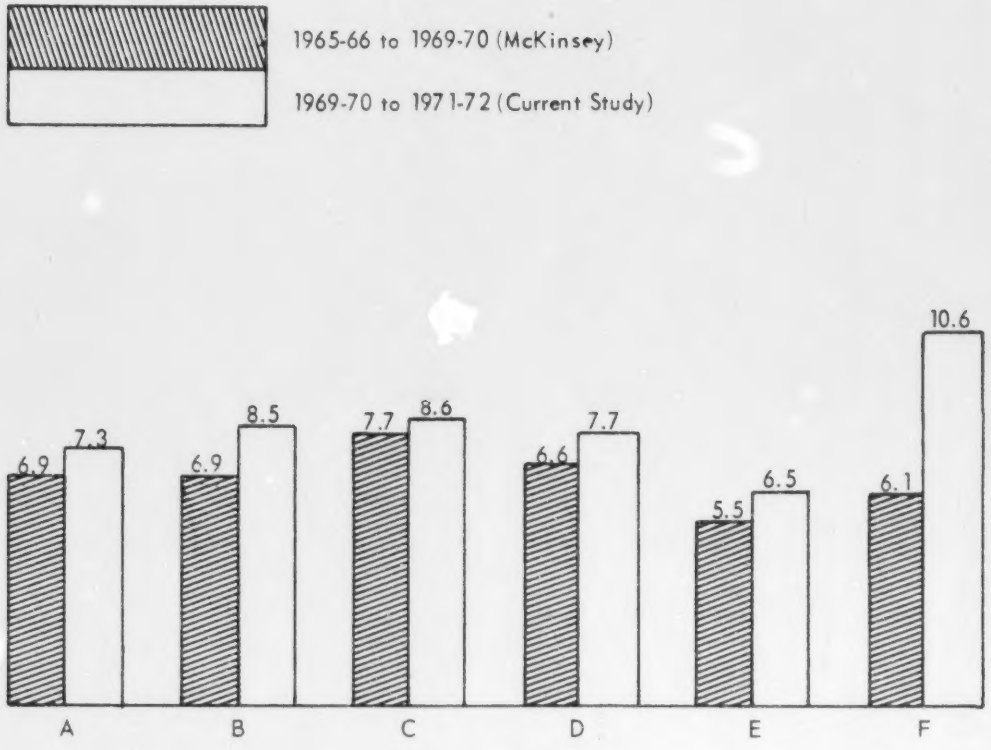
From this table one can estimate the average net increase per FTEE, 1969-72, in tuition and fees, having deducted the FTEE student aid. The average increase in net tuition and fee income per student, 1969-72, was: Group A, $87; B, $75.50; C, $117.50; D, $154; E, $109 and F, $73.50, which was less than $100 per student in three groups, A, B and F. For Groups A and B the increase in net income was insufficient to reverse the negative operating condition. For Group E the net FTEE increase of $109 in tuition and fees handily assisted in reversing the negative operating condition.

---

[11] Jenny, Hans H. and G. Richard Wynn. "Expenditures Expectations for Private Colleges," The Economics and Financing of Higher Education in the United States, U.S. Government Printing Office, Washington, D.C., 1969, p. 441.

[12] Russell, John Dale. The Finance of Higher Education, University of Chicago Press, Chicago, Illinois, 1967, p. 202.

ANNUAL GROWTH RATE OF TUITION AND FEES PER FTEE, 1969-70 TO 1971-72, BY GROUP



(Scale - 1 per cent = .2 inch)

Figure 3

Table 38

Student Aid Per FTEE as a Proportion of
FTEE Tuition and Fee Income, 1969-72

Group	FTEE Income 1969-70	FTEE Aid 1969-70	Per Cent	FTEE Income 1970-71	FTEE Aid 1970-71	Per Cent	FTEE Income 1971-72	FTEE Aid 1971-72	Per Cent
A	$1,317	$192	14.6	$1,356	$202	14.9	$1,513	$214	14.1
B	1,069	173	16.2	1,159	193	16.7	1,258	211	16.8
C	1,427	200	14.0	1,593	215	13.5	1,681	219	13.0
D	2,029	359	17.7	2,166	353	16.3	2,350	372	15.8
E	1,401	233	16.6	1,515	217	14.3	1,589	203	12.8
F	1,823	637	34.9	2,015	672	33.2	2,015	672	33.3
Total	$1,508	$310	20.6	$1,648	$317	19.2	$1,768	$321	18.2

Group C,with a net FTEE increase of $117.50,doubled the positive operating result. With the large FTEE net increase of $154, Group D changed from a $1.16 million deficit to $553,000 positive operating result.

The per student increase in tuition and fees, 1969-72, has been largely due to meeting operational costs other than student aid. Table 39 supports this conclusion.

Only Group E reduced FTEE student aid, and that by $33 for the 1969-72 period. For the other groups increases ranged from $13 to $38. The average increase in FTEE student aid for Groups A, B, C, D and F was $25.50, or 11.4 per cent of the average FTEE tuition and fee increases.

Table 39

Amount of Tuition and Fee FTEE Increase
Due to Student Aid, 1969-72

Group	1969-72 FTEE Tuition and Fee Increase	1969-72 FTEE Student Aid Increase	Net Result	Per Cent FTEE Tuition and Fee Increase Due to Student Aid Increase
A	$196	$22	+$174	+11.2
B	189	38	+ 151	+20.1
C	254	19	+ 235	+ 7.5
D	321	13	+ 208	+ 4.1
E	188	- 33	+ 188	-17.5
F	192	35	+ 157	+18.2
Average	$223	+$25.5	+$186	+11.4

As a total of all groups, FTEE tuition and fees increased annually, 1969-72, by $112 and enrollment increased by 2.26 per cent. Average annual rate of change in enrollment by group was as follows: Group A, 2.85 per cent; Group B, 1.21 per cent; Group C, 3.14 per cent; Group D, 1.8 per cent; Group E, 4.3 per cent; Group F, -1.6 per cent. Only Group F developed a negative annual FTEE growth rate in enrollment, although its annual tuition increase averaged only $96.

For 1973, Group F reversed the negative enrollment trend by an increase of 369 students. Group E had an increase in enrollment of 42 and Group D, 223. Group C had 9 institutions with increased enrollment and 20 with enrollment losses to a total of 1,209 students. Groups A and B had enrollment losses of 114 and 116, respectively, even though they increased student aid by $22 and $38, respectively.[13]

Student Aid Expenditures as a Percentage of Tuition and Fee Revenue

For all groups student aid showed an average annual increase of 4.2 per cent; tuition and fees, 10.7 per cent and student aid expenditures averaged 19.3 per cent of tuition and fees, 1969-72, with the growth rate of tuition and fees 6.5 per cent greater than that of student aid. Excluding Group F, the average percentage of tuition and fees devoted to student aid was 15.1 per cent. Group F more than doubled this percentage with 33.1 per cent.

Only Group B increased the proportion of tuition and fees devoted to student aid and that very slightly, 1969-72.

The decreases in the proportion of tuition and fees applied to student aid by the other groups follows: Group A, 0.44 per cent; Group C, 1.02 per cent; Group D, 1.83 per cent; Group E, 3.85 per cent and Group F, 3.87 per cent.

Data on student aid expenditures and tuition and fees are given in Table 40.

Student Aid and the Commonwealth

Student aid from the Commonwealth is the function of the Pennsylvania Higher Education Assistance Agency. PHEAA increased the number of awards to students, 1969-72, in CICU institutions from 20,783 to 23,093, an increase of 2,310 or 11.1 per cent. Of the 26,647 awards to private colleges in 1971-72, students in CICU institutions in this study received 86.3 per cent. These awards to CICU students represented 26.9 per cent of total PHEAA awards. Correlatively, it should be noted that 12,699 PHEAA awards, amounting to $7.7 million, went to out-of-state institutions, equalling 12.8 per cent of all awards.

[13]Enrollment figures for 1973 were reported by the Pennsylvania Department of Education, Bureau of Information Systems, Division of Educational Statistics, November 29, 1973.

Table 40

Student Aid Expenditures as Percentage of Tuition and Fee Revenue, 1969-72*

Group			1969-70	1970-71	1971-72	Average Annual Per Cent Change
A	(1)	Student Aid	$ 1,010	$ 1,101	$ 1,214	+ 9.7
	(2)	Tuition and Fees	6,941	7,405	8,602	+11.4
		(1) as per cent of (2)	14.55	14.86	14.11	+14.5
	(3)	Effective Rate Difference				+ 1.7
B	(1)	Student Aid	2,889	3,341	3,597	+11.7
	(2)	Tuition and Fees	17,840	20,047	21,485	+ 9.7
		(1) as per cent of (2)	16.19	16.66	16.74	+16.5
	(3)	Effective Rate Difference				- 2.0
C	(1)	Student Aid	8,775	9,597	10,201	+ 7.9
	(2)	Tuition and Fees	62,576	71,168	78,427	+11.9
		(1) as per cent of (2)	14.02	13.48	13.00	+13.5
	(3)	Effective Rate Difference				+ 4.0
D	(1)	Student Aid	4,173	4,253	4,490	+ 3.8
	(2)	Tuition and Fees	23,612	26,080	28,337	+ 9.5
		(1) as per cent of (2)	17.67	16.30	15.84	+16.6
	(3)	Effective Rate Difference				+ 5.7
E	(1)	Student Aid	7,176	6,972	6,811	- 2.6
	(2)	Tuition and Fees	43,136	48,590	53,262	+11.0
		(1) as per cent of (2)	16.63	14.34	12.78	+14.5
	(3)	Effective Rate Difference				+13.6
F	(1)	Student Aid	18,561	19,198	19,870	+ 3.5
	(2)	Tuition and Fees	53,128	57,545	63,972	+ 9.7
		(1) as per cent of (2)	34.93	33.36	31.06	+33.1
	(3)	Effective Rate Difference				+ 6.2
A-F	(1)	Student Aid	42,584	44,462	46,183	+ 4.2
	(2)	Tuition and Fees	207,233	230,835	254,085	+10.7
		(1) as per cent of (2)	20.54	19.26	18.17	+19.3
	(3)	Effective Rate Difference				+ 6.5

*Dollars in thousands.

PHEAA awards to all students in 1971-72 totaled $57.6 million, of which $19.1 million, or 33.1 per cent, went to CICU students. These student awards represented 3.25 per cent of the total income of CICU institutions. The dollar value of PHEAA awards to CICU students increased from $15.1 million to $19.1 million, 1969-72, or $4 million, an increase of 23.3 per cent.

PHEAA awards averaged $840 each to students in private colleges in 1971-72 compared with $828 each for CICU students. PHEAA awards to students in CICU institutions went principally to those in Group C and Group E institutions, totaling 15,053, or 65.2 per cent.

PHEAA also administers a guaranteed loan program, which provided loans amounting to $24 million in 1971-72 to students in private higher education, with loans to full-time undergraduates averaging $1,230 each.[14] CICU students representing 91.6 per cent of private enrollment received an estimated $24 million in guaranteed loans, which indirectly aided CICU institutions.

Table 41 provides data on PHEAA programs.

Higher Education Institutional Aid by the Commonwealth

The state aids independent higher education institutions not only through its PHEAA programs but also through its annual appropriations to 12 institutions. Four of these state-aided institutions are included in this CICU survey. The FTEE state aid to these institutions was in Group A, $978 to institution (1) and $532 to institution (2); in Group E, $368 and in Group F, $1,318.

This state aid, 1969-72, amounted to $46.3 million and tended to avoid operating deficits for Group A of $1.5 million; Group E, $2.9 million and Group F, $52.3 million (Table 42).

Table 42 shows impact of state aid on CICU institutions.

Overall Financial Health of CICU Institutions

Annual operating results (total current income--total current expenditures) are decisive indicators of the fiscal health of institutions, but their impact on institutions should be examined in relation to all financial resources. Changes in endowment funds and liquid net worth are also quite relevant to institutional fiscal health.

Endowment Funds

Table 43 shows total endowment funds of CICU institutions, 1969-72, increasing from $558.2 million to $744.7 million, a total of $186.5 million, an average increase of 16.7 per cent. Group A showed the largest increase, 49.4 per cent; Group F, the lowest increase, 30.0 per cent; with an average group increase, 1969-72, of 33.4 per cent.

---

[14] Annual Report 1971-72, Pennsylvania Higher Education Assistance Agency, p. 27ff.

Table 41

PHEAA Awards With Number and Dollar Changes, 1969-72
(Dollars in thousands)

Group	Awards--Number			Amount of Awards			Number Change	Per Cent	Dollar Change	Per Cent
	1969-70	1970-71	1971-72	1969-70	1970-71	1971-72				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
A	885	1,063	1,239	$ 641	$ 734	$ 949	354	40.0	$ 308	48.0
B	3,286	3,351	3,427	2,284	2,274	2,490	141	4.3	206	9.0
C	9,175	9,528	10,127	6,903	6,948	8,392	952	10.4	1,489	21.6
D	1,119	1,139	1,279	1,010	968	1,177	160	14.3	167	16.5
E	5,049	4,913	4,926	3,307	3,191	4,140	-123	- 2.4	- 833	-25.2
F	1,269	1,857	2,090	948	1,395	1,970	821	64.7	1,022	107.8
Total	20,783	21,851	23,088	$15,093	$15,510	$19,118	2,301	11.1	$4,025	23.3

The 23,088 PHEAA Awards to students in independent higher education institutions in 1971-72 represented $19,118,000 or an average value each of $828. During the 1969-72 period the number of awards increased 11.1 per cent and the total amount increased 23.3 per cent. These awards equaled 3.25 per cent of the total budget of the CICU institutions in 1971-72.

Table 42

Operating Result and State Aid Impact by Group and Institution, 1969-72[1]

Group	Number Institution	Number With State Aid	1969-70 Group Operating Result	1969-70 State Aid	1970-70 Group Operating Result	1970-70 State Aid	1971-72 Group Operating Result	1971-72 State Aid	Group Total Operating Result	Group Total State Aid	Group Operating Result Without State Aid	Institutional Operating Result With State Aid	Institutional FTEE State Aid
A	7	2	122	509	67	509	-48	545	+41	1,563	-1,522	+77	$978
												-226	532
E	5	1	-2,439	2,427	3,292	2,427	3,651	2,607	+4,504	7,461	-2,957	+1,952	368
F	4	1	-5,540	12,238	-4,810	12,100	-4,547	13,031	-14,897	37,369	-52,266	-13,178	1,318

[1]Dollars are shown in thousands. Of four state-aided institutions in survey of private colleges and universities, two attained a favorable balance in revenues and expenditures.

Table 43

Changes in Endowment Funds, 1969-72*

Group	1969-70	1970-71	1971-72	1969-72 Increase	Per Cent Change	Average Per Cent Change
A	$ 13,023	$ 18,124	$ 19,454	$ 6,431	49.4	+24.7
B	7,615	9,319	10,394	2,779	36.5	+18.3
C	48,681	59,142	66,315	17,634	36.2	+18.1
D	149,891	190,091	206,892	57,001	38.0	+19.0
E	49,161	60,779	65,017	15,856	32.3	+16.2
F	289,799	357,118	376,630	86,831	30.0	+15.0
Total	$558,170	$694,573	$744,702	$186,532	33.4	+16.7

*Dollars in thousands.

Endowment Fund Income

Endowment fund income of CICU institutions increased from $24.7 million to $25.3 million, 1969-72, and this trend projects endowment income of $26.1 million in 1975-76. The average rate of increase in endowment income was 1.21 per cent.

The rate of return in 1971-72 on endowment funds was 3.4 per cent, compared with 3.6 per cent in 1965-66, 5.2 per cent in 1970-71, and a projected rate of 4.3 per cent in 1975-76, according to the McKinsey report.

Table 44 presents relevant data.

Table 44

Changes in Endowment Income, 1969-72*

Group	1969-70 Income	1970-71 Income	1971-72 Income	Annual Income	Projection 1975-76
A	$ 513	$ 588	$ 620	+10.02	908
B	262	289	288	+ 4.98	350
C	2,174	2,398	2,539	+ 8.08	3,465
D	5,586	5,830	5,657	+ 0.65	5,805
E	1,920	2,049	1,930	+ 0.55	1,974
F	14,328	15,462	14,322	- 0.04	14,298
Total	$24,783	$26,616	$25,356	+ 1.21	$26,078

*Dollars in thousands.

Table 45

Changes in Liquid Net Worth, 1969-70 to 1971-72, Using End of Year Statistics*

Group		1969-1970	1970-1971	1971-1972	Dollar Change 1969-72	Rate of Change
A	1. Current Fund Balance	766	410	418	- 348	- 21.4
	2. Unexpended Plant Fund	876	614	998	+ 122	+ 6.9
	3. Quasi-endowment and Other	1,993	2,384	2,478	+ 485	+ 12.2
	TOTAL	3,635	3,408	3,894	+ 209	+ 3.3
B	1. Current Fund Balance	427	461	448	+ 21	+ 2.4
	2. Unexpended Plant Fund	6,035	7,100	6,590	+ 555	+ 4.6
	3. Quasi-endowment and Other	3,633	3,705	3,876	+ 243	+ 3.3
	TOTAL	10,095	11,266	10,914	+ 819	+ 4.1
C	1. Current Fund Balance	2,606	2,612	3,569	+ 963	+ 18.5
	2. Unexpended Plant Fund	14,463	13,769	19,845	+ 5,382	+ 18.7
	3. Quasi-endowment and Other	9,324	8,844	12,256	+ 2,932	+ 17.4
	TOTAL	26,393	25,225	35,760	+ 9,277	+ 17.6
D	1. Current Fund Balance	28,178	30,032	30,806	+ 2,628	+ 4.7
	2. Unexpended Plant Fund	5,972	5,840	9,013	+ 3,041	+ 25.5
	3. Quasi-endowment and Other	18,272	18,575	22,047	+ 3,775	+ 10.3
	TOTAL	52,422	54,447	61,866	+ 9,444	+ 9.0
E	1. Current Fund Balance	1,449	1,474	1,451	+ 2	+ 0.07
	2. Unexpended Plant Fund	1,601	4,682	4,823	+ 3,222	+100.6
	3. Quasi-endowment and Other	14,637	13,374	13,808	- 829	- 2.8
	TOTAL	17,637	19,530	20,082	+ 2,395	+ 6.8
F	1. Current Fund Balance	37,718	33,173	34,144	- 3,574	- 4.8
	2. Unexpended Plant Fund	15,909	12,367	13,788	- 2,121	- 6.7
	3. Quasi-endowment and Other	147,720	145,961	155,240	+ 7,520	+ 5.9
	TOTAL	201,347	191,501	203,172	+ 1,825	+ 4.3
A-F	1. Current Fund Balance	71,144	68,162	70,836	- 308	- 0.2
	2. Unexpended Plant Fund	44,856	44,372	55,057	+10,201	+ 11.4
	3. Quasi-endowment and Other	195,579	192,843	209,705	+14,126	+ 3.6
	TOTAL	311,579	305,377	335,598	+24,019	+ 3.9

*Dollars in thousands

Liquid Net Worth of Institutions Having Operational Deficits, 1969-72

Nineteen CICU institutions had a deficit condition for the 1969-72 period. In Table 46, the amount of deficits and liquid net worth of each of these institutions is given. Liquid net worth of an institution includes unexpended current fund balance, plant fund balance and quasi-endowment funds and is ostensibly available usable assets.

Table 46 shows that five of the 19 CICU institutions having deficit conditions, 1969-72, had no liquid net worth in 1971-72 to mitigate the impact of the deficits. Eight of the 19 institutions had liquid net worth that could absorb the deficits, if necessary, varying from 2 to 85 years. Six institutions had no liquid net worth and operational results in 1971-72. Three institutions, numbers 11, 12 and 15, had a surplus in liquid net worth and operational results in 1971-72.

Table 46

Liquid Net Worth of CICU Institutions Having Operational Deficits, 1969-72, and Comparison of Liquid Net Worth and Operating Results for 1971-72*

Institutions	Liquid Net Worth 1971-72	Operating Result 1971-72	Result	Years to Use Liquid Net Worth
1	-$ 144	-$ 47	-$ 191	0
2	106	-	-	-
3	1,523	- 77	1,446	19.7
4	- 698	- 24	- 722	0
5	627	- 290	337	2.2
6	- 165	- 165	- 330	0
7	- 16	- 146	- 162	0
8	626	- 124	502	5
9	- 143	- 170	- 313	0
10	448	- 26	422	17.2
11	1,207	15	1,222	-
12	1,206	21	1,227	-
13	3,354	-	-	-
14	25,954	- 305	25,649	85
15	858	272	1,130	-
16	1,456	- 471	985	3.1
17	- 1,540	116	- 1,424	0
18	12,465	- 1,372	11,093	9
19	$124,269	-$4,167	$120,102	29

*Dollars in thousands.

Projection of Financial Operating Condition

Disregarding liquid net worth of the 19 CICU institutions which were in a deficit operational condition, 1969-72, and projecting the

financial operational trend of each to 1975-76, the researcher found that nine institutions would be in a surplus condition and 10 in a deficit condition. Within two to five years, 1976-81, four of these deficit institutions could become operational surplus institutions. The remaining six deficit institutions would continue their financially deteriorating condition unless the recent trend were reversed by appropriate measures. Three of these six seemed to be in the process of reversing the negative financial trend (Table 47).

Table 47

Projection of Financial Operating Condition of CICU Institutions Having a Deficit, 1969-72, to 1975-76*

Institution	1969-70	1970-71	1971-72	Amount Change 1969-72	Projected Operational Condition 1975-76
1	-$ 65	- 109	-$ 47	+ 18	- 11
2	- 13	1	-	+ 14	+ 29
3	- 20	- 129	- 77	- 57	+ 35
4	- 2	- 16	- 24	- 22	- 68
5	- 44	- 420	- 290	- 246	+ 202
6	17	- 66	- 165	- 182	- 529
7	- 185	- 89	- 146	+ 39	- 70
8	- 154	- 194	- 124	+ 30	- 64
9	22	- 144	- 170	- 192	- 554
10	3	- 91	- 26	- 23	+ 20
11	- 100	26	15	+ 115	+ 245
12	- 179	1	21	+ 200	+ 421
13	- 423	- 1	-	+ 422	+ 487
14	- 143	- 114	- 305	- 162	- 629
15	- 1,197	- 89	272	+ 1,469	+ 3,210
16	- 473	- 426	- 471	+ 2	- 467
17	- 2,065	472	116	+ 2,181	+ 4,498
18	- 1,241	- 1,425	- 1,372	- 131	- 1,160
19	-$5,102	-$3,909	-$4,167	+ 935	- 2,297

*Dollars in thousands.

Although the trend for three institutions predicts nothing but negative financial results, the actual amounts of the deficits, 1969-72, do not seem to prohibit rehabilitative measures. The amount of negative change for institution number 4 was only $22,000; for number 6, $182,000 and for number 9, $192,000 compared to their current expenditures in 1971-72 of $1.3 million, $1.9 million and $6.4 million, respectively. These deficits, then, represented only 1.7 per cent of the 1971-72 current revenues for institution number 4; 9.6 per cent for number 6 and three per cent for number 9.

Institution number 4 had a loss of enrollment, 1972-73 to 1973-74, of 117; number 6 gained 50 students and number 9 lost 8 students. Only institution number 4 seemed to have a significant student enrollment problem.

Additional Institutional Capacity

Additional enrollment desired by CICU institutions, as indicated by respondents, increased from 7,660 students, 1971-72, to 8,947 students, 1972-73, an increase of 1,287 or 16.8 per cent. From 1971-72 to 1972-73, these same institutions increased their total enrollment by 1,204 students, but Group B lost 174 students (Table 49). From 1972-73, losses in enrollment were: Group A, 114; Group B, 116; Group C, 1,209, a total of 1,439. For the same period gains were: Group D, 223; Group E, 42 and Group F, 369, a total of 634. The overall result for the six Groups A-F was a loss of 805 students.[16]

Table 48

Additional Enrollment Desired, 1971-72 and 1972-73

Group	Number Students Desired 1971-72	Number Students Desired 1972-73	Difference
A	525	547	+ 22
B	2,994	3,028	+ 34
C	2,141	3,082	+ 941
D	450	545	+ 95
E	650	1,095	+ 445
F	900	650	- 250
Total	7,660	8,947	+1,287

Since CICU institutions gained 1,204 students in 1972-73, the net desired increase in enrollment became 7,743 students, but with the net loss of 1,209 students in 1973-74, they then desired 8,952 students.

Nonutilized student housing capacity 1972-73. Having indicated a desire for 8,947 additional students, the CICU institutions also indicated housing available at the colleges and in the community, as shown in Table 49.

For all groups available student housing spaces (9,569) exceeded the number of students desired (8,947). Groups A, B and E had fewer housing spaces (1,850) than the desired enrollment (4,670). Groups C, D and F had housing spaces (7,719) which greatly exceeded the desired enrollment increase (4,670). It seems reasonable to assume that this disparity may be due to anticipated enrollment of commuter students in Groups A, B and E institutions. With Groups C, D and F apparently more housing is available than could be used by students that could be accommodated without expansion of faculty. Another possibility is that Group F may have greatly overestimated available community student housing (3,260).

[16] Preliminary Report on Fall Enrollments at Pennsylvania's Colleges and Universities, Division of Educational Statistics, Bureau of Information Systems, November 29, 1973.

Table 49

Housing Capacity Available for Desired
Additional Enrollment, 1972-73

Group	On Campus		Community	Fall Housing Campus and Community
	Fall	Spring		
A	179	245	120	299
B	438	535	163	601
C	2,163	2,446	1,392	3,555
D	437	204	266	703
E	-	80	950	950
F	201	212	3,260	3,461
Total	3,418	3,722	6,151	9,569

Additional enrollment desired by instructional program without increasing faculty is shown by group in Table 50. In Survey Form IX, this item is denoted as "Excess Departmental Enrollment Capacity," and departments reported this as 17,759, almost double the number for which space was indicated as available. Table 50 shows program capacities reduced in proportion to available space.[17]

If one were to consider five courses per student as an average course load, he could interpret the "excess" enrollment potential as 3,552 students instead of 8,202 determined in Table 50. This would be questionable because few students would be taking engineering. In addition, Group F gave a count for space but none for programs. Group C and Group D gave program counts very disproportionate to their space count.

CICU institutions had the physical space as well as the departmental student program vacancies for a larger enrollment of students in 1972-73 without any increase in faculty.

[17]Martinko, Agnes. Additional Institutional Capacity, developed from Form IX, Survey of Independent Colleges and Universities, Division of Educational Statistics, Pennsylvania Department of Education, September 1973.

Table 50

Desired Enrollment in Instructional Program Areas, 1972-73

Group	Desired Enrollment Increase in Space Available	Desired Enrollment Increase Reported by Departments	Department Student Vacancies Reported as Adjusted[1]									
			Humanities		Soc. Science		Science/Math		Engineering		Other	
			Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper	Lower
A	547	405	-	120	-	25	76	129	-	25	-	126
B	3,028	4,722	467	578	299	220	285	313	-	-	513	353
C	3,032	8,548	717	617	260	104	442	242	57	-	382	212
D	545	2,574	41	244	10	61	15	82	-	-	12	79
E	1,095	1,510	120	160	65	73	69	98	-	18	268	225
F	650	-	-	-	-	-	-	-	-	-	-	-
Total	8,897	17,759	1,345	1,719	634	483	887	864	57	43	1,175	995

[1]Desired enrollment reported by departments was adjusted according to space available as shown in first column.

REASSESSMENT OF RETRENCHMENT PROPOSALS

The original McKinsey report, February 1971, proposed four retrenchment actions to help the independent colleges and universities achieve financial viability: (1) increase student-faculty ratio by two per cent per year, (2) reduce enrollment growth to one per cent per year, (3) reduce student aid as a fraction of tuition by two per cent per year to 16 per cent by 1975-76 and (4) reduce administrative and general expenditures by two per cent per year from projected expenditures.[18]

Proposal One: Increase Student Faculty Ratio

This study found that the CICU institutions increased their average annual student-faculty ratio, 1969-70 to 1971-72, by only 1.57 per cent, falling short of the McKinsey goal by 0.43 per cent. The increase in student-faculty ratio of many institutions were obscured by the Group F decreases in student-faculty ratio, 8.7 to 1 to 8.5 to 1. The Group F graduate schools historically maintain low student-faculty ratios.

It would seem that institutional research studies to determine optimum class size, student faculty ratio and faculty load might be useful in developing greater cost effectiveness in the instructional program. The use of appropriate learning technology and modification of organizational structure and operation might prove fruitful in increasing faculty cost effectiveness.

Proposal Two: Reduce Enrollment Growth to One Per Cent Per Year

CICU institutions in this study had an average annual growth rate in FTE enrollment, 1969-70 to 1971-72, of 2.26 per cent, 1.26 more than proposed by the McKinsey report. In 1972-73, however, the growth rate for independent higher education in the Commonwealth dropped to 0.58 per cent.

Decreasing enrollment growth is cost effective only when such growth would require plant and facilities expansion, faculty expansion and extra student services not included in tuition and fees. For institutions having underutilized capacity in space and faculty, additional students could be highly cost effective. In fact, increasing the number of part-time students, and consequently the FTE enrollment, could increase the income and services of the institution with little increase in overhead costs.

Table 51 provides enrollment and financial data.

Using a rank order correlation technique, the researcher found a

---

[18] Op. cit., McKinsey, Chapter 3, p. 7.

Table 51

Relationship of Change in Enrollment
and Change in Operating Results

Deficit Institutions	Enrollment Increase/ Decrease 1969-72	Net Operating Result 1969-72	Enrollment Increase/ Decrease 1972-73
1	+ 87	+ 18	- 21
2	+ 124	+ 14	- 14
3	+ 19	- 57	+ 39
4	+ 76	- 22	+ 50
5	- 378	- 246	- 277
6	- 57	- 182	- 117
7	- 22	+ 39	+ 129
8	+ 56	+ 30	- 52
9	- 63	- 23	+ 10
10	- 57	+ 115	- 91
11	+ 122	- 192	- 8
12	+ 34	+ 200	- 112
13	- 101	+ 422	+ 228
14	+ 154	+ 1,469	- 80
15	- 103	+ 2	+ 87
16	+ 443	+ 2,181	- 164
17	+ 38	- 162	- 3
18	+ 127	- 131	+ 16
19	+ 135	+ 935	- 7

positive correlation, r = .361, between favorable enrollment change and favorable dollar change in operating results of the 19 CICU institutions having operating deficits, 1969-72. Changes in enrollment, then, accounted for only (r^2 = .130) 13 per cent of the variance in operating results of these institutions. Conversely, factors other than enrollment accounted for 87 per cent of the variance in operating results. Too much noncost-effective enrollment does not seem to be a serious problem with these institutions.

Proposal Three: Reduce Student Aid as a Fraction of Tuition by Two Per Cent Per Year to 16 Per Cent by 1975-76

Table 40 showed that student aid, 1969-72, took the following proportions of tuition and fees: Group A, 14.5 per cent; Group B, 16.5 per cent; Group C, 13.5 per cent; Group D, 16.6 per cent; Group E, 14.5 per cent and Group F, 33.1 per cent. Groups A, C and E were already below the 16 per cent goal proposed. Groups B and D were about one-half per cent above the proposed goal. Group F used more than two times the proposed proportion for student aid and was the only group requiring a big change.

Proposal Four: Reduce Administrative and General Expenditures by Two Per Cent Per Year From Projected Expenditures

Reduction of administrative and general category expenditures is a real challenge and one to which the various groups of CICU institutions have not responded. Table 52 shows the data on increasing expenditures for the administration and general category.

In the administration and general category expenditures have increased from $56.3 million to $66.0 million, 1969-72, a total of $9.6 million, and at an average annual rate of 8.2 per cent. Even a reduction of two per cent in the annual rate would see these expenditures increasing at 6.2 per cent per year, which may not be sufficient reduction for cost effectiveness.

Table 52

Administration and General Expenditures by Group, with Annual Rate of Change 1969-72

Group	1969-70	1970-71	1971-72	Rate of Change Per Year
A	$ 2,372	$ 2,748	$ 2,898	+ 8.2
B	5,909	6,617	7,329	+ 9.6
C	18,073	20,158	21,329	+ 8.9
D	9,348	9,570	10,340	+ 4.7
E	11,338	12,259	13,089	+ 7.4
F	9,358	10,100	11,046	+ 9.6
Total	$56,398	$61,452	$66,031	+ 8.2

The average annual rate of increase in administration and general expenditures ranged from 4.7 per cent for Group D to 9.6 per cent for Groups B and F.

Appendix A

Member Institutions of the Commission for Independent Colleges and Universities (CICU) Utilizing the Grouping Devised by McKinsey & Company

GROUP A--7 Institutions

Dropsie University
Keystone Junior College
Mount Aloysius Junior College
Philadelphia College of Art
Philadelphia College of Pharmacy
Philadelphia College of Textiles
Saint Charles Borromeo Seminary

GROUP B--14 Institutions

Allentown College of Saint Francis de Sales
Cabrini College
Chestnut Hill College
Gannon College
Geneva College
Holy Family College
Immaculata College
LaRoche College
Mercyhurst College
Our Lady of Angels College
Robert Morris College
Saint Francis College
Villa Maria College
York College of Pennsylvania

GROUP C--29 Institutions

Albright College
Allegheny College
Alliance College
Beaver College
Carlow College
Cedar Crest College
College Misericordia
Elizabethtown College
Juniata College
King's College
LaSalle College
Lebanon Valley College
Lycoming College
Marywood College
Messiah College
Moravian College
Muhlenberg College
Widener College
Point Park College
Rosemont College
Saint Joseph's College
Saint Vincent College
Seton Hill College
Susquehanna University
Thiel College
Ursinus College
Waynesburg College
Westminster College
Wilkes College

GROUP D--9 Institutions

Chatham College
Dickinson College
Franklin & Marshall College
Gettysburg College
Haverford College
Lafayette College
Swarthmore College
Washington & Jefferson College
Wilson College

GROUP E--5 Institutions

Bucknell University
Drexel University
Duquesne University
Villanova University
University of Scranton

GROUP F--4 Institutions

Bryn Mawr College
Carnegie-Mellon University
Lehigh University
University of Pennsylvania

Appendix B

Summaries of Financial Data For

CICU Higher Education Institutions

Group A

Group B

Group C

Group D

Group E

Group F

Group A-F

GROUP A

	1969-70	1970-71	1971-72	1975-76
I-II. ENROLLMENT AND FACULTY				
FTEE	5,270	5,460	5,684	6,211
Weighted FTEE	5,465	5,635	5,861	6,254
Full-time Equivalent Teaching Faculty	392	416	437	545
Weighted FTEF/Teaching Faculty Ratio	13.9	13.5	13.4	12.4
III. OPERATING REVENUES (thousands)(total)	11,652	12,908	14,006	20,200
A. Educational and General Revenue (total)	9,072	10,069	11,050	15,950
Tuition and Fees	6,241	7,405	8,602	13,256
Endowment Income	513	588	620	908
Private Gifts and Grants	566	813	586	645
State Maintenance	509	509	545	626
Sponsored Research	65	221	214	243
Separately Budgeted Research	102	0	0	
Other Educational and General	373	533	483	882
B. Student Aid Revenue	745	840	866	1,200
C. Major Public Service Program Revenue	0	0	0	0
D. Auxiliary Enterprise Revenue (total)	1,835	1,999	2,090	1,868
Housing	653	737	815	1,370
Food Service	478	483	539	688
Other Auxiliary	704	779	736	810
IV. OPERATING EXPENDITURES (thousands)(total)	11,530	12,841	14,054	20,900
A. Educational and General Expenditures (total)	8,800	9,735	10,676	15,710
Instruction-Salaries	3,569	3,923	4,371	6,554
Instruction-Other	815	839	1,029	1,665
Extension and Public Service	94	82	87	61
Libraries	408	412	474	645
Plant Maintenance and Operation	1,024	1,183	1,272	1,967
General Administration, General Institutional	1,690	1,945	2,006	2,633
Student Services	682	803	892	1,527
Sponsored Research	94	264	196	87
Separately Budgeted Research	133	0	0	0
Other Educational and General 9, 10, 11	291	268	349	710
B. Student Aid Expenditures	1,010	1,101	1,214	1,600
C. Major Public Service Program Expenditures	0	0	0	0
D. Auxiliary Enterprise Expenditures (total)	1,720	2,005	2,164	2,695
Housing	641	724	780	3,400
Food Service	464	452	503	614
Other Auxiliary	615	829	866	1,186
OPERATING RESULT III - IV (thousands)	122	67	- 48	- 700
V. PLANT AND INDEBTEDNESS				
Plant Expenditures (End of period)(thousands)	4,360	2,268	2,236	840
Indebtedness (End of period)	6,008	6,516	7,727	7,174
Increase in Indebtedness		508	1,211	- 553
Debt Service (End of period)	351	462	475	436
Increase in Debt Service		111	13	-39
Debt Service Per Student	66.60	84.62	83.57	64.96
Debt Service as Per Cent of Operating Expense	3.0	3.6	3.4	2.1

GROUP B

		1969-70	1970-71	1971-72	1975-76
I-II.	ENROLLMENT AND FACULTY				
	FTEE	16,688	17,299	17,082	17,090
	Weighted FTEE	16,939	17,595	17,407	18,386
	Full-time Equivalent Teaching Faculty	962	1,052	1,052	1,262
	Weighted FTEE/Teaching Faculty Ratio	17.6	16.7	16.5	14.6
III.	OPERATING REVENUES (thousands)(total)	31,835	35,540	37,216	50,949
	A. Educational and General Revenue (total)	22,480	25,303	26,593	37,292
	Tuition and Fees	17,840	20,047	21,485	31,632
	Endowment Income	262	289	288	350
	Private Gifts and Grants	3,323	3,781	3,562	4,138
	State Maintenance				
	Sponsored Research	61	85	31	0
	Separately Budgeted Research			5	
	Other Educational and General	994	1,101	1,222	1,846
	B. Student Aid Revenue	1,237	1,705	1,887	4,500
	C. Major Public Service Program Revenue			27	
	D. Auxiliary Enterprise Revenue (total)	8,118	8,532	8,709	10,000
	Housing	2,873	2,923	3,070	3,576
	Food Service	3,373	3,477	3,482	3,712
	Other Auxiliary	1,872	2,132	2,157	2,882
IV.	OPERATING EXPENDITURES (thousands)(total)	29,576	33,638	36,035	54,400
	A. Educational and General Expenditures (total)	19,009	22,016	23,877	37,746
	Instruction-Salaries	7,755	8,732	9,550	14,483
	Instruction-Other	1,230	1,247	1,327	1,547
	Extension and Public Service	278	295	302	357
	Libraries	1,251	1,406	1,453	1,966
	Plant Maintenance and Operation	2,173	2,628	2,871	5,035
	General Administration, General Institutional	4,285	4,788	5,414	8,629
	Student Services	1,616	1,829	1,915	2,696
	Sponsored Research	98	85	30	21
	Separately Budgeted Research	8	9	8	8
	Other Educational and General 9, 10, 11	315	997	1,007	1,405
	B. Student Aid Expenditures	2,889	3,341	3,597	5,600
	C. Major Public Service Program Expenditures				
	D. Auxiliary Enterprise Expenditures (total)	7,678	8,281	8,561	10,700
	Housing	2,957	3,252	3,261	3,594
	Food Service	2,769	2,813	3,003	3,535
	Other Auxiliary	1,952	2,216	2,297	3,192
	OPERATING RESULT III - IV (thousands)	2,259	1,902	1,181	- 3,451
V.	PLANT AND INDEBTEDNESS				
	Plant Expenditures (End of period)(thousands)	8,789	7,170	9,843	13,072
	Indebtedness (End of period)	25,010	28,234	31,689	39,591
	Increase in Indebtedness		3,224	3,450	7,902
	Debt Service (End of period)	1,790	1,921	2,090	2,643
	Increase in Debt Service		131	169	553
	Debt Service Per Student	107.26	111.05	122.35	154.65
	Debt Service as Per Cent of Operating Expense	6.1	5.7	5.8	5.7

GROUP C

		1969-70	1970-71	1971-72	1975-76
I-II.	ENROLLMENT AND FACULTY				
	FTEE	43,849	44,672	46,644	52,785
	Weighted FTEE	44,780	45,709	47,925	55,070
	Full-time Equivalent Teaching Faculty	2,955	3,102	3,181	3,696
	Weighted FTEE/Teaching Faculty Ratio	15.2	14.7	15.1	14.9
III.	OPERATING REVENUES (thousands)(total)	104,749	117,076	127,675	190,400
	A. Educational and General Revenue (total)	74,902	84,848	93,259	144,607
	Tuition and Fees	62,576	71,168	78,427	123,230
	Endowment Income	2,174	2,398	2,539	3,465
	Private Gifts and Grants	5,999	6,699	6,684	8,349
	State Maintenance				
	Sponsored Research	347	460	600	640
	Separately Budgeted Research	0	0	0	
	Other Educational and General	3,806	4,123	5,009	6,467
	B. Student Aid Revenue	3,836	4,029	4,430	5,900
	C. Major Public Service Program Revenue	135	107	163	414
	D. Auxiliary Enterprise Revenue (total)	25,876	28,092	29,823	39,700
	Housing	8,970	9,645	10,605	14,823
	Food Service	11,327	12,208	12,898	16,723
	Other Auxiliary	5,579	6,239	6,320	7,150
IV.	OPERATING EXPENDITURES (thousands)(total)	102,566	113,831	122,959	176,800
	A. Educational and General Expenditures (total)	69,183	77,736	84,283	125,152
	Instruction-Salaries	28,520	31,946	34,136	48,951
	Instruction-Other	4,901	5,160	5,635	7,453
	Extension and Public Service	731	786	733	738
	Libraries	3,684	4,118	4,199	5,476
	Plant Maintenance and Operation	8,823	10,437	11,559	19,881
	General Administration, General Institutional	12,986	14,426	15,475	21,980
	Student Services	5,087	5,732	5,854	8,500
	Sponsored Research	198	213	409	2,060
	Separately Budgeted Research	293	345	281	144
	Other Educational and General 9, 10, 11	4,000	4,573	6,002	13,640
	B. Student Aid Expenditures	8,775	9,597	10,201	13,800
	C. Major Public Service Program Expenditures	195	168	219	289
	D. Auxiliary Enterprise Expenditures (total)	24,413	26,330	28,256	37,900
	Housing	8,298	9,201	10,057	14,906
	Food Service	10,227	10,806	11,473	17,943
	Other Auxiliary	5,888	6,323	6,726	8,774
	OPERATING RESULT III - IV (thousands)	2,183	3,245	4,716	13,600
V.	PLANT AND INDEBTEDNESS				
	Plant Expenditures (End of period)(thousands)	34,650	34,841	13,552	5,795
	Indebtedness (End of period)	100,179	109,554	113,009	101,023
	Increase in Indebtedness		9,375	3,455	-11,986
	Debt Service (End of period)	4,525	5,601	6,861	6,024
	Increase in Debt Service		1,076	1,261	- 837
	Debt Service Per Student	103.20	125.38	147.09	114.10
	Debt Service as Per Cent of Operating Expense	4.4	4.9	5.6	3.4

GROUP D

		1969-70	1970-71	1971-72	1975-76
I-II.	ENROLLMENT AND FACULTY				
	FTEE	11,638	12,042	12,059	12,951
	Weighted FTEE	11,654	12,053	12,072	12,358
	Full-time Equivalent Teaching Faculty	1,003	1,020	1,017	1,045
	Weighted FTEE/Teaching Faculty Ratio	11.6	11.8	11.9	11.8
III.	OPERATING REVENUES (thousands)(total)	50,131	54,060	56,834	73,800
	A. Educational and General Revenue (total)	36,438	40,173	41,766	54,951
	Tuition and Fees	23,612	26,080	28,337	40,814
	Endowment Income	5,586	5,830	5,657	5,805
	Private Gifts and Grants	3,800	4,356	3,917	4,190
	State Maintenance				
	Sponsored Research	1,157	1,222	982	661
	Separately Budgeted Research	0	0	0	
	Other Educational and General	2,283	2,685	3,873	4,569
	B. Student Aid Revenue	2,702	2,627	3,170	4,200
	C. Major Public Service Program Revenue			60	
	D. Auxiliary Enterprise Revenue (total)	10,991	11,260	11,858	14,000
	Housing	3,726	3,949	4,279	5,642
	Food Service	4,869	5,049	5,323	6,368
	Other Auxiliary	2,396	2,262	2,256	2,140
IV.	OPERATING EXPENDITURES (thousands)(total)	51,291	53,909	56,281	67,900
	A. Educational and General Expenditures (total)	35,633	38,044	39,738	49,416
	Instruction-Salaries	12,437	13,383	13,966	17,612
	Instruction-Other	3,103	3,390	3,458	4,303
	Extension and Public Service	197	257	192	180
	Libraries	2,128	2,348	2,524	3,552
	Plant Maintenance and Operation	4,453	4,893	4,704	4,104
	General Administration, General Institutional	7,814	7,860	8,837	11,368
	Student Services	1,534	1,710	1,503	1,435
	Sponsored Research	1,167	1,237	1,005	703
	Separately Budgeted Research	5	5	5	5
	Other Educational and General 9, 10, 11	1,795	2,086	3,544	14,841
	B. Student Aid Expenditures	4,173	4,253	4,490	5,200
	C. Major Public Service Program Expenditures			45	
	D. Auxiliary Enterprise Expenditures (total)	11,485	11,612	12,008	13,200
	Housing	4,156	4,263	4,596	5,628
	Food Service	4,629	4,682	4,764	5,046
	Other Auxiliary	2,700	2,667	2,648	2,547
	OPERATING RESULT III - IV (thousands)	- 1,160	151	553	5,900
V.	PLANT AND INDEBTEDNESS				
	Plant Expenditures (End of period)(thousands)	10,332	4,929	6,094	6,007
	Indebtedness (End of period)	44,135	43,417	42,698	4,351
	Increase in Indebtedness		- 718	- 819	- 447
	Debt Service (End of period)	2,839	2,472	2,429	2,398
	Increase in Debt Service		- 367	-43	- 31.3
	Debt Service Per Student	243.94	205.28	201.43	185.16
	Debt Service as Per Cent of Operating Expense	5.5	4.6	4.3	3.5

GROUP E

		1969-70	1970-71	1971-72	1975-76
I-II.	ENROLLMENT AND FACULTY				
	FTEE	30,786	32,078	33,527	39,752
	Weighted FTEE	35,261	37,263	39,328	49,300
	Full-time Equivalent Teaching Faculty	2,173	2,106	2,022	2,491
	Weighted FTEE/Teaching Faculty Ratio	16.2	17.7	19.5	19.7
III.	OPERATING REVENUES (thousands)(total)	68,868	78,094	83,704	120,300
	A. Educational and General Revenue (total)	55,596	61,805	65,987	93,008
	Tuition and Fees	43,136	48,590	53,262	67,548
	Endowment Income	1,920	2,049	1,930	1,974
	Private Gifts and Grants	1,580	1,894	1,221	2,337
	State Maintenance	2,427	2,427	2,607	3,054
	Sponsored Research	2,899	2,858	3,154	3,756
	Separately Budgeted Research	0	0	0	
	Other Educational and General	3,634	3,987	3,813	4,660
	B. Student Aid Revenue	1,967	3,152	3,148	6,300
	C. Major Public Service Program Revenue	0	0	0	0
	D. Auxiliary Enterprise Revenue (total)	12,305	13,137	14,569	20,500
	Housing	3,368	3,692	4,111	6,121
	Food Service	4,514	4,701	5,344	7,516
	Other Auxiliary	4,423	4,744	5,114	6,836
IV.	OPERATING EXPENDITURES (thousands)(total)	71,307	74,802	80,053	103,100
	A. Educational and General Expenditures (total)	52,100	54,743	57,999	71,850
	Instruction-Salaries	19,646	20,692	21,365	25,264
	Instruction-Other	5,864	5,926	6,777	9,118
	Extension and Public Service	16	14	10	3
	Libraries	2,339	2,398	2,872	4,382
	Plant Maintenance and Operation	7,960	7,957	8,387	9,143
	General Administration, General Institutional	8,616	9,409	10,044	13,650
	Student Services	2,722	2,850	3,045	3,813
	Sponsored Research	2,762	2,660	2,535	2,119
	Separately Budgeted Research				
	Other Educational and General 9, 10, 11	2,175	2,837	2,964	5,639
	B. Student Aid Expenditures	7,176	6,972	6,811	6,100
	C. Major Public Service Program Expenditures				
	D. Auxiliary Enterprise Expenditures (total)	12,031	13,087	15,243	24,600
	Housing	3,079	3,538	5,421	24,730
	Food Service	3,719	4,095	4,116	5,062
	Other Auxiliary	5,233	5,454	5,706	6,783
	OPERATING RESULT III - IV (thousands)	- 2,439	3,292	3,651	17,200
V.	PLANT AND INDEBTEDNESS				
	Plant Expenditures (End of period)(thousands)	10,571	24,273	5,542	5,315
	Indebtedness (End of period)	35,586	48,459	51,295	49,557
	Increase in Indebtedness		2,873	2,836	1,738
	Debt Service (End of period)	2,371	3,809	3,940	3,863
	Increase in Debt Service		1,438	131	22
	Debt Service Per Student	77.02	118.74	117.52	97.17
	Debt Service as Per Cent of Operating Expense	3.3	5.1	4.9	3.7

GROUP F

		1969-70	1970-71	1971-72	1975-76
I-II.	ENROLLMENT AND FACULTY				
	FTEE	29,151	28,557	28,696	27,903
	Weighted FTEE	39,324	39,001	38,788	38,553
	Full-time Equivalent Teaching Faculty	4,544	4,643	4,542	4,534
	Weighted FTEE/Teaching Faculty Ratio	8.7	8.4	8.5	8.5
III.	OPERATING REVENUES (thousands)(total)	244,266	249,536	269,037	326,691
	A. Educational and General Revenue (total)	170,971	168,957	182,694	210,067
	Tuition and Fees	53,128	57,545	63,972	92,745
	Endowment Income	14,328	15,462	14,322	14,298
	Private Gifts and Grants	7,952	9,464	9,069	12,065
	State Maintenance	12,238	12,100	13,031	15,305
	Sponsored Research	49,529	41,250	44,286	34,064
	Separately Budgeted Research	0	0	0	
	Other Educational and General	33,796	33,136	38,014	48,644
	B. Student Aid Revenue	9,431	9,231	9,385	9,300
	C. Major Public Service Program Revenue	47,490	53,331	53,072	66,750
	D. Auxiliary Enterprise Revenue (total)	16,374	18,017	23,886	51,700
	Housing	5,032	4,870	10,564	39,257
	Food Service	4,726	5,508	5,020	5,735
	Other Auxiliary	6,616	7,639	8,302	13,091
IV.	OPERATING EXPENDITURES (thousands)(total)	250,816	254,446	273,584	326,005
	A. Educational and General Expenditures (total)	165,169	161,693	172,404	188,378
	Instruction-Salaries	39,129	40,695	42,381	49,713
	Instruction-Other	29,544	15,884	17,425	2,635
	Extension and Public Service	183	169	222	345
	Libraries	4,725	5,148	5,713	8,353
	Plant Maintenance and Operation	12,330	13,149	14,143	14,665
	General Administration, General Institutional	8,230	8,870	9,646	13,244
	Student Services	1,128	1,230	1,400	2,158
	Sponsored Research	49,125	43,824	45,842	39,360
	Separately Budgeted Research	0	0	7	
	Other Educational and General 9, 10, 11	20,775	32,724	35,625	112,074
	B. Student Aid Expenditures	18,561	19,198	19,870	22,800
	C. Major Public Service Program Expenditures	48,828	53,548	54,359	64,014
	D. Auxiliary Enterprise Expenditures (total)	18,258	20,007	26,951	27,199
	Housing	5,111	5,528	10,408	12,004
	Food Service	4,986	4,623	5,926	5,970
	Other Auxiliary	8,161	9,856	10,617	10,745
	OPERATING RESULT III - IV (thousands)	- 5,540	- 4,810	- 4,547	686
V.	PLANT AND INDEBTEDNESS				
	Plant Expenditures (End of period)(thousands)	40,369	32,812	78,973	82,347
	Indebtedness (End of period)	47,398	56,880	119,735	144,105
	Increase in Indebtedness		9,482	62,855	24,370
	Debt Service (End of period)	489	502	3,943	5,649
	Increase in Debt Service		13	3,441	1,706
	Debt Service Per Student	16.77	17.58	137.41	202.45
	Debt Service as Per Cent of Operating Expense	0.2	0.2	1.4	1.7

GROUP A-F

		1969-70	1970-71	1971-72	1975-76
I-II.	ENROLLMENT AND FACULTY				
	FTEE	137,382	140,108	143,692	157,129
	Weighted FTEE	153,423	157,256	161,381	178,532
	Full-time Equivalent Teaching Faculty	12,029	12,339	12,251	13,709
	Weighted FTEE/Teaching Faculty Ratio	12.8	12.7	13.2	13.2
III.	OPERATING REVENUES (thousands)(total)	512,501	547,214	588,472	795,900
	A. Educational and General Revenue (total)	369,459	391,155	421,349	37,207
	Tuition and Fees	207,233	230,835	254,085	381,197
	Endowment Income	24,783	26,616	25,356	26,078
	Private Gifts and Grants	23,220	27,007	25,039	29,541
	State Maintenance	15,174	15,036	16,183	17,462
	Sponsored Research	54,061	46,096	49,267	39,791
	Separately Budgeted Research	102	0	5	0
	Other Educational and General	44,886	45,565	51,414	67,823
	B. Student Aid Revenue	19,918	21,584	22,826	31,400
	C. Major Public Service Program Revenue	47,625	53,438	52,322	67,292
	D. Auxiliary Enterprise Revenue (total)	75,499	81,037	90,975	138,600
	Housing	24,622	25,816	33,444	63,078
	Food Service	29,287	31,426	32,607	42,656
	Other Auxiliary	21,590	23,795	24,924	35,732
IV.	OPERATING EXPENDITURES (thousands)(total)	517,085	543,467	582,966	749,400
	A. Educational and General Expenditures (total)	349,894	363,967	388,977	506,360
	Instruction-Salaries	111,056	119,377	125,769	171,667
	Instruction-Other	45,457	32,546	35,651	20,445
	Extension and Public Service	1,499	1,603	1,546	1,674
	Libraries	14,535	15,830	17,235	26,371
	Plant Maintenance and Operation	36,763	40,247	42,936	63,292
	General Administration, General Institutional	43,621	47,288	51,422	78,461
	Student Services	12,769	14,154	14,609	20,510
	Sponsored Research	53,444	48,283	50,017	43,296
	Separately Budgeted Research	439	359	294	157
	Other Educational and General 9, 10, 11	29,351	43,485	49,491	57,573
	B. Student Aid Expenditures	42,584	44,462	46,183	55,100
	C. Major Public Service Program Expenditures	49,073	53,716	54,623	74,654
	D. Auxiliary Enterprise Expenditures (total)	75,585	81,322	93,183	137,300
	Housing	24,242	26,506	34,523	81,382
	Food Service	26,794	27,471	29,790	38,897
	Other Auxiliary	24,549	27,345	28,860	39,937
	OPERATING RESULT III - IV (thousands)	- 4,584	3,747	5,506	46,500
V.	PLANT AND INDEBTEDNESS				
	Plant Expenditures (End of period)(thousands)	109,071	106,293	116,240	113,376
	Indebtedness (End of period)	258,316	293,060	366,153	383,701
	Increase in Indebtedness		34,744	73,093	21,024
	Debt Service (End of period)	12,365	14,767	19,738	21,013
	Increase in Debt Service		2,402	4,971	993
	Debt Service Per Student	90.00	105.40	137.36	136.42
	Debt Service as Per Cent of Operating Expense	2.4	2.7	3.4	3.5

Bibliography

Annual Report 1971-72, Pennsylvania Higher Education Assistance Agency, Harrisburg, June 1972.

Carnegie Commission on Higher Education, A Digest of Reports and Recommendations, Berkeley, California, October 1971.

College and University Business Administration, American Council on Education, Washington, D.C., 1969.

Dukiet, Kenneth H., "The Cost of Higher Education 1973-74," College Management, January 1974, pp. 8-18.

Durkee, Frank M. Some Alternatives in State Financing on Higher Education in Pennsylvania, Pennsylvania Department of Education, Bureau of Information Systems, Division of Research, Harrisburg, 1972.

Feldman, Paul and Stephen A. Hoenack, "Private Demand for Higher Education in the United States," Economics and Financing of Higher Education in the United States, U.S. Government Printing Office, Washington, D.C., 1969.

Financing Higher Education: Alternatives for the Federal Government, Monograph Five, M.D. Orwig, Editor, The American College Testing Program, Iowa City, Iowa, 1971.

Jellema, William W. Financial Status, Present and Projected of Private Institutions of Higher Learning, Association of American Colleges, Washington, D.C., 1971.

Jenny, Hans H., and G. Richard Wynn, "Expenditure Expectations for Private Colleges," The Economics and Financing of Higher Education in the United States, Government Printing Office, Washington, D.C., 1969.

Lawrence, Ben, Chairman, National Commission on Financing Postsecondary Education, "Panel to Push Standardized Cost Accounting by Colleges," The Chronicle of Higher Education, November 26, 1973.

McGrath, Earl J., "Survival Kit for the Liberal Arts Colleges," The Chronicle of Higher Education, January 10, 1972.

"More Aid for Private Colleges Urged," Patriot News, November 9, 1973.

Preliminary Report on Fall Enrollments at Pennsylvania's Colleges and Universities, Division of Educational Statistics, Bureau of Information Systems, November 29, 1973.

Russell, John Dale. The Finance of Higher Education, University of Chicago Press, Chicago, Illinois, 1967.

1972-73 State Scholarship Statistics by PHEAA Adjusted Income Levels and Type of Institution, Pennsylvania Higher Education Assistance Agency, Harrisburg, June 1973.

Bibliography
(Continued)

Statistical Abstract of the United States 1972, 93d Annual Edition, U.S. Government Printing Office, Washington, D.C., July 1972.

Study of the Financial Condition of Independent Higher Education in the Commonwealth of Pennsylvania, Commission for Independent Colleges and Universities, McKinsey & Company, Inc., Washington, D.C., February 1971.

The Chronicle of Higher Education, "Future College Enrollments Now Seen Falling Far Short of Previous Projections," October 1, 1973.

The Chronicle of Higher Education, "203 Gain Common Fund in Ten Months," May 1, 1972.

The Chronicle of Higher Education, "$123 Million Now In Investment Cooperative," January 31, 1972.

The Classroom and Class Laboratory Utilization Study, Monograph Number Seven, Division of Institutional Research, Office of the Chancellor, The California State Colleges, Sacramento, March 1970.

Update Study of the Financial Condition of Independent Higher Education in the Commonwealth of Pennsylvania, Commission for Independent Colleges and Universities, McKinsey & Company, Inc., Washington, D.C., February 1972.